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FINANCIAL TIMES

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NEWS SUMMARY

GENERAL BUSINESS

Gromyko warns Bonn on missiles

Soviet Foreign Minister Andrei Gromyko, on the first day of his visit to Bonn, warned West Germany of "serious consequences" should it accept new-generation U.S. intermediate-range nuclear missiles.

Nato decided to install Pershing-2 missiles from this autumn if the U.S. and the Soviet Union did not reach agreement on limitations.

Mr Gromyko pointed out that West Germany was the only country, where it was planned to site the weapons, from which strategic targets in the heart of the Soviet Union could be reached within minutes.

In London, nine women anti-nuclear campaigners were detained after interrupting House of Commons proceedings.

Tough Whitelaw line on shooting

British Home Secretary William Whitelaw promised the House of Commons a "ruthless response" on the shooting by police of a man in a car, apparently in mistake for a man wanted for attempted murder. Prosecution of the officers will be considered.

Victim Stephen Waldorf's condition was critical last night. Page 16

Iraq air attack

Iraq said its air force attacked Iran's main oil export terminal at Kharg Island in the Gulf, and a gas plant in southern Iranian city Ahwaz.

German spying case

West Germany charged woman clerk Ingeborg Behnisch, 42, with spying for East Germany, while working at an air base in Bavaria.

Jail reform pledge

French authorities promised that planned jail reforms would be carried out quickly after 41 men slashed their wrists at a prison near Paris.

El Al return

Striking El Al pilots returned to work under threat of instant dismissal, enabling Israel's national airline to resume limited service.

Basque victim freed

Miguel Echevarria, son of a Basque steel magnate, was freed by kidnappers near San Sebastian. It is believed locally that \$1.3m ransom in Spanish and French currency was paid.

Jeweller charged

British jeweller Robert Chatwin, arrested in Denia, Spain, after the discovery there of jewels worth \$4.7m, appears in court today, charged with smuggling.

Guerrilla killed

Peru's most wanted guerrilla, Maoist Carlos Tello, known as Comrade Carla, was killed as she led about 100 guerrillas in a battle with civil guards in the Andes.

'Withdraw degrees'

Radical Egyptian lawyer Abdel Halim Ramadan has started court action to have rescinded Cairo University degrees awarded to the widow and son of the late President Anwar Sadat.

Briefly...

Soviet Union needs to build more than 600,000 km (372,000 miles) of roads to connect villages, says Pravda newspaper.

Twenty people drowned in the Nile, near Cairo when their sailboat collided with a floating crane.

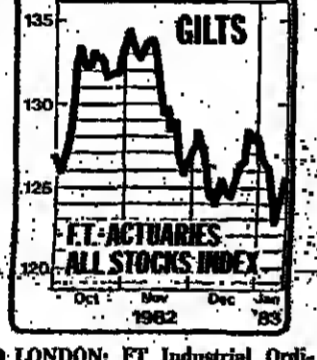
Lloyd's moves to suspend Posgate

LLOYD'S of London, the international insurance market, moved again to suspend former leading underwriter Ian Posgate despite a court decision last week that Lloyd's ruling council had acted outside its powers in suspending him. Mr Posgate will be allowed to argue his case before a final decision. Lloyd's also moved yesterday to require working underwriters to disclose earnings from business deals. Page 8

STERLING gained 55 points to reach \$1.5885, and it also rose to DM 3.7475 (DM 3.73), FF 10.6125 (FF 10.575) and SwFr 3.0725 (SwFr 3.0625), and was unchanged at 1965. Its Bank of England trade-weighted index rose from Friday's close \$16 to \$15. Page 39

DOLLAR rose to DM 3.358 (DM 3.354) and FF 6.5625 (FF 6.56), and fell to SwFr 1.9375 (SwFr 1.934) and Y22.95 (Y23.05), with its trade-weighted down from 117.3 to 117. Page 30

GOLD rose \$11.5 in London to reach \$494.5, its highest closing price since April 1981. In Frankfurt it rose \$15.25 to \$496.5, and in Zurich by \$16 to \$499.5. Page 23



LONDON: FT Industrial Ordinary index went up 5.6 to 6198. Government Securities showed gains averaging more than 1 per cent. Page 25

WALL STREET: Dow Jones index closed up 3.96 at 1,084.81. Page 24

TOKYO: Nikkei Dow index dropped 5.8 to 8062.73, but the Stock Exchange index edged up 0.4 to 593.26. Page 24

HONG KONG: Hang Seng index rose 8.15 to 874.49. Page 24

AUSTRALIAN all-shares index gained 3.3 at 533.1. Page 24

FRANKFURT: Commerzbank index improved 2.6 to 748.1. Page 24

OMAN is reported to have confirmed its offer to U.S. and Japanese oil customers of a \$2.5 a barrel discount. Page 4

EAST GERMAN economic growth in 1982 was 3 per cent, compared with a target of 4.6 per cent. Page 3

FRANCE: Public sector raised \$10bn in 1982 in bond issues and credits. Page 17. Unemployment fell 1.1 per cent in December to 2,009,000.

ISRAELI trade deficit rose last year to a near-record \$2.9bn.

TURKEY is to establish three free parts. Page 2

COMPANIES

S & W BERISFORD, which owns British Sugar, improved pre-tax profits 34.4 per cent to \$54.7m (\$37m) in the year ended September. Lex, Page 16; Details, Page 20

AIRBUS INDUSTRIE, the European consortium, plans to increase production. Page 6

ALGEMENE BANK of the Netherlands has been given Australian clearance to set up a merchant bank there with Kerry Packer's Consolidated Press Holdings. Page 19

ALCAN Aluminiumwerke, West German subsidiary of the Canadian group, is closing its Ludwigshafen smelter. Page 17

U.S. compromise 'breakthrough' for budget agreement

BY ANATOLE KALETSKY IN WASHINGTON

Advocates of lower budget deficits and higher taxes in the U.S. Administration have won their biggest economic policy victory to date with President Ronald Reagan's approval of social security tax increases and benefit reductions which should cut U.S. budget deficits by around \$20bn in each of the next seven years.

The reforms proposed at the weekend by the special Presidential Commission on Social Security headed by Mr Alan Greenspan are designed to raise revenues and cut benefits by a total of \$160bn.

Since some of these savings consist of transfers from other government funds the precise effects of the programme on the federal budget will not be clear until after the commission's full report is published on Thursday.

But already U.S. officials are failing to see the agreement as a major breakthrough. In addition to the large contribution it will make to reducing deficits directly, the social security reform would serve as a model for further budget compromises to be reached between the White House and the Congress in the weeks ahead, both White House officials and congressional leaders predicted yesterday.

From President Reagan's point of view, the compromise has the further advantage of dealing with what many analysts regarded as the Republican Party's most serious political liability in the last congressional elections - the public's perception that the Reagan administration was willing to allow the collapse of the whole social security system.

The system, which provides almost all American workers with old-age pensions, disability payments and health insurance benefits, would have run out of money by 1984 in the absence of new revenues or benefit cuts.

The President's attempt to secure cuts in social security in his first year in office was the only serious lapse of the whole social security system.

About two thirds of the \$160bn will come from a combination of accelerating payroll tax increases originally scheduled for the late 1980s and new taxes to be imposed solely on higher-income social security recipients from 1985 onwards.

100,000 annually, would have to make an interest-free loan to the government equal to 5 per cent of their tax burden.

The proceeds of the loan, to be imposed this year and next and repaid from 1987, are to go mainly to help boost the building industry and thus encourage a general economic upswing.

Although technical, the measure contains a lot of potential political explosive. The FDP rejected a supplementary tax on higher incomes when in alliance with the Social Democrats, and only went along with the CDU-CSU variation because the sum would be repaid when the economy improved.

Many in the CDU were against repayment from the first, and - as the election nears - have become

Continued on Page 16

Bonn coalition divided over supplementary tax

BY JONATHAN CARR IN BONN

A NEW dispute - this time over tax policy - has erupted between the West German government coalition partners in the approach to the general election on March 6.

The differences have given further heart to the opposition Social Democrats (SPD), who already feel they are winning more voters to their stance on nuclear arms control.

After days of contradictory reports, the tax dispute came into the open yesterday at a press conference given by the Christian Democrat (CDU) Finance Minister, Dr Gerhard Stoltenberg.

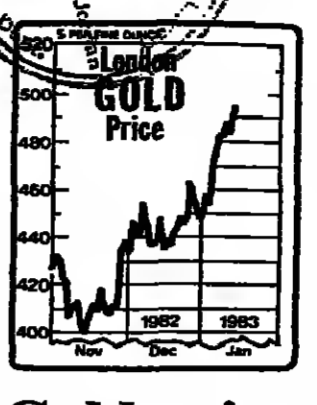
He stressed that the Union parties - CDU and Bavarian Christian Social Union (CSU) - had agreed that a supplementary tax being levied on higher income earners should not be paid back later this decade as planned.

The failure of Drysdale Government Securities, a small Wall Street security dealer, resulted in a \$117m after-tax write-off in the second quarter, which forced the bank to report its first-ever quarterly net loss of \$183m in that period.

In the third quarter, earnings improved somewhat, although the bank's involvement with the failed Penn Square Bank sent its non-performing loans soaring.

Excluding the impact of the special loss related to Drysdale the bank said yesterday that the full-year earnings included increased net interest income and higher other operating income, partly offset by a larger provision for possible losses and increased operating expenses.

Chase said its provision for possible loan losses was \$263m in 1982 compared to \$211m in 1981. The provision in the fourth quarter was



Gold price comes close to \$500

By Jeremy Stone and John Edwards in London

BROADLY BASED speculative buying of gold in London yesterday pushed the bullion price close to \$500 an ounce. At the afternoon fixing in London, the price reached \$498.50, \$10 an ounce higher than last Friday's close in New York.

Later in the afternoon, however, the price eased to close in London at \$494.50. There was quite a substantial volume of two-way trading but, said one dealer, "the nearer we got to \$500, the more the market tended to run out of steam."

Early trading in New York gave more evidence that an approach to the \$500 level might lead to profit taking, as the price tailed away during the morning. At one stage the New York spot price had slipped to \$488.75.

The rise in gold was the main influence pushing copper prices on the London Metal Exchange yesterday to the highest level since August 1981. The cost price for high grade copper gained \$23.5 to \$1,022.5 a tonne following further heavy speculative buying. Other base metals remain subdued by lack of demand and the firmer trend of sterling against the dollar.

Platinum and silver also followed the upward trend in gold. The spot price of silver rose by 35.9p to \$16.40p an ounce. The sterling quotation for free market platinum was lifted by \$4.75 to \$301.5 an ounce but the dollar price was \$10.25 up at \$479.25.

Although some dealers believe that there are still some short positions lurking in the gold market - reflecting speculation that the price would fall - the broad movement of trading recently has been an influx of small investors.

Dealers in London were agreed that the market had acquired some speculative impetus. Commodities, Page 23; Money Markets, Page 30

UK opposes boost in EEC farm prices

BY LARRY KLINGER IN BRUSSELS

BRITAIN last night stood alone in outright opposition to any guaranteed price rises for EEC surplus farm produce above the European Commission's proposed average 4.4 per cent increase for the coming marketing year.

With only the possible exception of the Netherlands - which indicated that it thought the Commission's proposals were "about right" - Britain was alone among the community members in rejecting any extra price boost for the key products in structural surplus such as milk, cereals and wine.

Even West Germany, the traditional British ally in seeking "prudent" farm price increases, confined its declared opposition last night to Commission agricultural monetary proposals which could reduce any eventual award to its farmers.

The EEC's Agriculture Ministers - meeting yesterday against the sombre background of increasing Community surpluses, static consumption, bumper world harvests and serious EEC-U.S. tensions over competition for limited markets - gave a first reading to the Commission's 1983-84 price proposals, due to take effect from April 1.

Echoing strong warnings from the Commission that EEC financial constraints and the world-market situation provided no scope for greater increases, Mr Peter Walker, the British Minister, said it was

clear that those countries which do not have to pay for the Common Agriculture Policy's excesses were again those anxious to increase EEC spending to benefit their farmers.

Britain and West Germany are the only two significant net contributors to the EEC budget.

The Commission is proposing a 5.5 per cent norm for this year's annual price award, which if its suggested penalties for current milk and cereals overproduction and its proposed monetary realignments were applied, would be reduced to an average 4.4 per cent increase.

This is among the lowest price proposals within the past 10 years and contrasts sharply with last year's average 10.4 per cent final award.

Mr Poul Dalsager, the Farm Commissioner, told the Ministers that Commission expectations of continuing high levels of production and growing world stockpiles had been confirmed by independent forecasts and warned that the EEC would "very probably require" a supplementary budget this year even on the basis of the Commission's proposals.

He emphasised that latest figures suggested that the EEC's 8m farmers last year increased their real incomes by nearly 8 per cent.

Green £ parity with sterling. Page 2; Court move on transport policy. Page 16

Belgrade expected to avoid rescheduling

BY PETER MONTAGNON IN LONDON

YUGOSLAVIA appeared last night to have won its battle to avoid a formal rescheduling of its commercial bank debt despite mounting arrears on debt service payments by key borrowing institutions.

Commercial bank creditors, however, are to be asked to provide additional loans to Yugoslavia this year as well as maintaining existing credit lines as part of an international effort to keep the country's \$18bn foreign debt on an orderly footing.

This emerged from a one-day meeting in Zurich yesterday between a high-ranking Yugoslav delegation and a group of leading foreign bank creditors. The meeting was also attended by representatives of the International Monetary Fund.

The readiness of commercial banks to provide assistance is expected to be one condition for a \$1bn rescue package from Western governments which is to be discussed tomorrow in Bern.

Details of yesterday's meeting were slow to emerge, particularly the amount of extra loans banks will be asked to provide. Speculation in London continued that commercial banks will be asked to put up fresh funds in proportion to their existing loan exposure.

Yugoslavia's ability to borrow on commercial markets has been impaired by the spill-over effect of the Polish and Romanian debt crisis and lack of central coordination of its borrowing.

Brazilian debt package. Page 4

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EUROPEAN NEWS

Gromyko warns Bonn on arms

BY JAMES BUCHAN IN BONN

MR ANDREI GROMYKO, the Soviet Foreign Minister, yesterday warned West Germany of serious consequences should it accept the stationing of a new generation of U.S. intermediate-range missiles.

Speaking in Bonn at the close of his first day of formal talks with Chancellor Helmut Kohl's government, Mr Gromyko singled out West Germany as the planned site for new U.S. Pershing-2 missiles.

However, in a speech that mingled threats and blandishments in equal measure, Mr Gromyko did underline Moscow's willingness to negotiate over its land-based missiles, which NATO believes now number over 600.

In December 1979, NATO resolved to install 572 intermediate-range missiles from this autumn unless the U.S. and the Soviet Union reached agreement.

Of the new missiles, 464 ground-launched cruise are to be installed in Britain, Italy, West Germany and, possibly the Netherlands, and 108 Pershing 2s in West Germany.

"We cannot ignore the fact," Mr Gromyko said in a dinner speech, "that the Federal Republic is the only state where the stationing of Pershing 2 missiles is planned, which can reach strategic objectives in the heart of the Soviet Union within minutes."

The Soviet Union claims that the Pershing 2 can reach Soviet territory in six minutes' flying time. The NATO claim is 14 minutes.

He confirmed the offer of Mr Yuri Andropov, the Soviet Communist Party general secretary, to deploy only the same number of missiles as the French and British nuclear systems, which the Soviet Union now holds to be 182. He said the remainder would be moved "to Siberia where they cannot reach targets in Western Europe" and that these would include "our most modern missiles."

This confirms what had already been hinted: that the Soviet Union

will remove some of its force of SS-20 missiles, numbering at least 333 and with three independently targetable warheads. However, Mr Gromyko made no mention of dismantling these systems, as had been hinted to Herr Hans-Jochen Vogel, the Social Democrat candidate in West Germany's March elections, in Moscow last week.

Mr Gromyko, however, sharply rejected President Reagan's "zero option" as a unilateral disarmament by the Soviet Union. The "zero option" envisages complete dismantling of the Soviet land-based intermediate-range missile force in return for no deployment of cruise and Pershing.

'Green £' at parity with sterling

By Larry Klinger in Brussels

BRITAIN'S "green pound," its European Community agriculture currency, was brought into line with sterling yesterday, removing for the first time in two years the EEC tax on food imports into the UK.

While good news for the British consumer, the corresponding effect for UK farmers is to erase their long-standing EEC subsidy on exports. This could affect Britain's strategy in the series of talks which opened yesterday to fix this year's increase in guaranteed prices for the Community's 5m farmers.

In the European Commission's proposals, Britain was being asked for a 2.3 per cent reduction in the gap between the "green pound" and sterling, which would have meant a corresponding drop in any eventual rise in the UK's farm prices for the coming marketing year.

The recent dramatic fall in sterling, however, has effectively removed the possibility of a "green pound" revaluation, leaving Britain to deal with the overall level of farm-price rises without having to defend its farmers on the monetary front, while accepting a situation that would tend to keep shop prices even higher.

Britain, which had earlier rejected outright any revaluation, made clear yesterday that it was satisfied with the situation in relation to farm prices, provided there were no further dramatic changes in sterling.

Nevertheless, the EEC agricultural system will play a major part in this year's price-fixing.

When "green" currencies are out of line with their national counterparts, the EEC agricultural system acts as a tax on imports and a subsidy for exports, or the reverse, depending on the balance between the two.

In Britain's case, the complex system of frontier taxes and levies called monetary compensatory amounts have for the past two years meant that its farmers have enjoyed hefty export subsidies while UK shop prices have tended to remain higher.

French Right attacks debt level as local poll campaign starts

BY DAVID HOUSEGO IN PARIS

FRANCE's centre and right wing opposition have launched their campaign for the municipal elections in early March with a predictable sting attack on Socialist management of the economy.

Former President Giscard d'Estaing accused the Government in a radio broadcast on Sunday night of being the largest overseas borrower in the world in 1982. He said that if France continued at such a pace it would be the world's most indebted nation in a couple of years.

The ex-president, who has fully emerged from the political "purgatory" that he imposed on himself after his defeat in 1981, has calculated that interest payment on the debt would cost every Frenchman FF2,000 (\$300) this year and FF4,000 by 1985.

He used as his base the widely quoted figure that the total of French public sector and bank borrowing overseas last year reached a record \$25bn.

Mr Raymond Barre, the former Prime Minister, took up the same theme last week. He said on televi-

sion that the level of foreign indebtedness threatened France's independence and limited its room for manoeuvre. As President Mitterrand is known to share similar fears - even though he would think such figures exaggerated - it is an effective line of attack.

The opposition hopes to transform the local elections into a national test of the Government's standing and to inflict a defeat that will force a major policy change.

M Giscard d'Estaing and M Jacques Chirac, the mayor of Paris and the most popular opposition figure, have gone further than this in claiming that a massive rejection at the polls would force the Government to bring forward the legislative elections.

There is no constitutional precedent for this - and clearly President Mitterrand has no intention of bowing to calls for early legislative election. But the Government would find its job more difficult if it received a setback in March.

The Left starts from the disadvantage that the Government's pop-

ularity has tumbled in the opinion polls since the franc's devaluation in June and the subsequent austerity package. The IFOP - France Soir opinion poll indicates that the number of those "satisfied" with President Mitterrand slumped to 37 per cent in December before climbing to 39 per cent last week - still the lowest score recorded by any President of the Fifth Republic except M Giscard just before his defeat.

Socialists and Communists combined gained control of 37 towns with populations of more than 30,000 in their victory sweep in the last municipal elections of 1977 but they are expected to lose a substantial number this time. M Lionel Jospin, First Secretary of the Socialist Party, has said that the loss of 10-15 towns would be normal. The Left is hampered in many urban areas by continuing squabbles over representation between Communists and Socialists.

The Right is also handicapped by the continuing personal rivalries between M Giscard d'Estaing, M Barre and M Chirac.

Davignon sees German steel 'wise men'

BY GILES MERRITT IN BRUSSELS

KEY TALKS on the streamlining of the West German steel industry were held in Brussels yesterday between Viscount Etienne Davignon, the EEC Industry Commissioner, and the "three wise men" recently appointed by Bonn to shape the restructuring of the sector.

The discussion is believed to have centred on the overall capacity cutbacks that the European Commission is seeking as a condition for permitting the DM 15bn (\$6.36bn) worth of financial aids for steel re-

quired from Bonn by West Germany's seven leading steelmakers.

The triumvirate of "steel moderators" appointed by Count Otto von Lambedorff, the West German Economics Minister, to negotiate stern cutbacks and modernisation measures is understood to have reviewed, with M Davignon, the restructuring targets for 1985 recently submitted to Brussels by the German steel industry.

M Davignon has made it increasingly plain that projected over-

capacity throughout the EEC steel sector is so serious that by 1985 some 30m-35m tonnes must be cut from the forecast total of 150m tonnes of EEC finished steel capacity, rather than the 15m tonnes originally targeted.

Although the three-man panel is not empowered to negotiate with Brussels, it is clear that EEC pressures will play an important part in its activities as a mediator between the West German steelmakers.

The three senior German busi-

ness leaders who were six weeks ago given the task of negotiating a national steel restructuring programme are Herr Gunther Vogel, a former chief executive of Krupp who is also familiar with operations at Thyssen and Salzgitter; Herr Marcus Bierich, of the Allianz insurance group who was previously Mannesmann's finance director; and Herr Alfred Herrhausen, who has a longstanding connection with Klockner Werke and is currently with Deutsche Bank.

Turkish plan to exploit position with free ports

BY METIN MUNIR IN ISTANBUL

TURKEY has decided to establish three free ports and zones in the hope of exploiting its proximity to the Middle East and its associate membership of the European Community.

The foreign capital department of the state planning organisation is working on a decree to be submitted to the Government at the end of the month, an official said. The decree, establishing the free ports, is scheduled to be published in the first quarter of this year.

The zones will be in Yumurtalik, in the south-east, near the port of Mersin and to Syria; Antalya on the Mediterranean; and Alaia near the Aegean port of Izmir, the official said.

"We are hoping to attract compa-

panies from the Far East which seek access to the Common Market and Common Market companies selling to the Middle East," said the official.

The largest zone will be the one in Yumurtalik - also the terminal of the Iraq-Turkey pipeline near Mersin, which has become a booming port as a consequence of the Iran-Iraq war.

Officials hope that Yumurtalik might become a storage point for companies serving the warring neighbours. One country which might be attracted to Izmir is the Soviet Union, which asked the Turkish Government several years ago for space to store containers.

Discussions on taxation are under way with the Finance Ministry. One thesis was to grant complete exemption from income tax and re-

duce the 40 per cent corporate tax by half. Another was to do away with both and levy tax according to turnover.

A similar development is being planned for the self-proclaimed Turkish Federated State of Cyprus, which is taking steps to enhance the competitiveness of its free port and zone in Famagusta, the island's eastern port.

A new bill, expected to become law this year, will exempt firms in the zone from income and corporate taxes for eight years. The former ranges between 20 and 65 per cent and the latter is 48 per cent. Companies in the zone will also benefit from exemption from all other taxes and duties.

The Famagusta free port and zone was established four years ago

and there are nine companies operating there. They include Unipac, an affiliate of the London-based Nadir group, which manufactures cardboard boxes used in the export of the island's agricultural produce.

Nadir controls Polly Peck, whose shares shot up in value last year as a result of the group's Cyprus-based operations. Also operating in the zone are Sezal Turkes-Feyzi Akkaya, Turkey's largest overseas contracting group, and Intrepid, a Swiss concern dealing in bulk operations and packing.

Mr Ismet Kotak, the Turkish Cypriot Industry Minister, said that more than \$1m would be spent this year to complete the second phase infrastructure projects in the zone.

Unemployment figure edges down in France

By Our Paris Staff

FURTHER EVIDENCE that unemployment is levelling off in France has come in December figures showing a slight decrease for the second month running.

M Jean Le Garrec, Minister for Employment, said that within the next two months the total might be brought down below the 2m barrier, first reached last October.

He claimed the latest results which left the total increase for 1982 at 5.8 per cent, compared with 23.4 per cent the previous year - as a success for government job policies, including the cutting of the legal working week to 39 hours, youth training, programmes and the innovative "solidarity contracts".

The official jobless rate stood at 2.12m, seasonally corrected to 2.01m, some 1.1 per cent down on November. Unemployment has remained stable at a little over 2m since the early summer.

Renault strikers throw out settlement proposals

BY DAVID WHITE IN PARIS

HOPES OF a solution to disputes at Renault's two biggest car plants evaporated yesterday when striking paintshop workers at Flins, west of Paris, voted overwhelmingly to reject settlement proposals.

The Communist-led CGT trade union, which had prevented the vote from taking place as originally planned last Friday, agreed after several weekend meetings to join other unions and back the consultation.

The latest offer involved increases of up to FF140 (£12.50) a month on the form of extra allowances. This compares with FF300 sought by the 800 strikers.

Some 11,000 of the 18,000 workers at the plant are laid off as a result of the strike, which began on January 6.

Similar measures are now threatened at the group's Boulogne-Billancourt factory on the outskirts of Paris, which employs 18,000. A dispute in the paintshop there has ham-

pered production since last Tuesday. The management has called a meeting at the plant today to discuss the situation, with the outlook worsened by the Flins vote.

Production of more than 13,000 vehicles - R5, R18 and R4 models - has already been lost.

The company said it was "surprised" by yesterday's vote, which produced a majority of 155 to two against a return to work.

Meanwhile, at the Talbot car plant at Poissy, near Paris, unions have reacted angrily to the announcement of lay-offs for five days in January and February. Like Flins, the Poissy plant was a flashpoint for damaging motor industry strikes last spring.

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Issues to be discussed:

- Economic policy in Japan and in the European Community and the World Economy
- Japanese Investments in Europe and European Investments in Japan
- Exchange of Technologies
- Research and Development Role of public and private sectors for Japan-EC Cooperation

Speakers and Panelists taking part:

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EUROPEAN NEWS

IEA reiterates fears of new fuel crisis

BY RAY DAFTER, ENERGY EDITOR

THE International Energy Agency continues to be worried about the possibility of a new fuel crisis occurring within the next decade.

The agency's economists have looked again at its projections of energy supply and demand and concluded that its previous warnings still hold good.

Four months ago it produced an energy study showing that the "deceptively stable" oil market masked underlying trends which could result in further crises. Since then, the oil market has become even weaker and the energy industry's forecasts of future fuel demand have been lowered even further.

IEA economists point out that while problems arising from a tight energy market may have been pushed back a year or two—perhaps into the early

1990s—they have not disappeared. They stress that the impact of the continuing world-wide recession and lowered growth in developing countries has been largely offset by the widespread cancellation and deferral of large fuel production projects involving coal, heavy oil, synthetic fuels and offshore crude oil.

The agency, representing most of the world's industrialised countries, is concerned that it still does not know the true impact of energy conservation measures. Consequently, staff are now working on a project on energy savings. They want to find out how much of the drop in demand has been caused by permanent, structural changes in energy consumption patterns and how much has been recession-led and is thus temporary.

Romania to hold defence spending at 1982 level

BY DAVID BUCHAN

ROMANIA HAS announced that it will hold military spending over the next three years to its 1982 defence budget level of Lei 9.8bn (\$1.97bn), as an example for fellow Warsaw Pact members and Nato to follow.

This emerged from a week-end meeting of President Nicolae Ceausescu with Government and Communist Party leaders, which in effect produced a maverick Romanian "minority report" on the recent Warsaw Pact summit in Prague.

Romania's freeze on defence spending increases would amount to a real reduction, if inflation is taken into account, and it follows a cut from Lei 10.2bn in 1981.

Romanian officials say their country subscribed fully to the Prague summit communiqué, which detailed disarmament proposals by Mr Yuri Andropov, the Soviet leader, and called for a non-aggression pact between Europe's two military blocs. But they added that since Romania could not find agreement among fellow Warsaw Pact members on its particular concern about defence spending levels, the Bucharest Government has now made an additional proposal on this.



Mr Ceausescu... "minority report" on summit

This calls on Nato and the Warsaw Pact to work towards reducing military spending by 20 per cent by 1985 and, as a first step, to freeze defence budgets at their 1982 level. The Romanian statement claimed that Nato and Warsaw Pact military spending accounted for 80 per cent of the world total.

Walesa may take legal action to regain his job

BY CHRISTOPHER BOBINSKI IN WARSAW

MR LECH WALESKA, the leader of Solidarity, Poland's banned trade union, yesterday continued his efforts to return to his old job at the Lenin Shipyard in Gdansk.

Last Friday, he was refused entry to the yard when he went back for his job and he later notified the management formally that he was ready to start work the following Monday.

Yesterday, Mr Walesa said that he would consider taking legal action against the yard if he was not taken back. He would wait for a week for an answer from the yard's management. He made no attempt to enter the yard but knelt and

prayed briefly at the giant monument outside the main gate.

"I was and shall remain a unionist," he said, telling reporters that he considered himself a shipyard worker as well.

The Polish authorities have as yet made no public comment on Mr Walesa's attempts to return to work. However, he has received another summons to attend the Gdansk finance department which is pursuing an investigation into the finances of the Gdansk branch of the union which Mr Walesa headed.

The authorities have already reported "irregularities" in the union's accounts.

Many Moscow lorry drivers drunk at wheel, says Pravda letter

BY ANTHONY ROBINSON IN MOSCOW

MANY OF the lorry drivers operating in Moscow are drunk behind the wheel for much of the day, a group of senior drivers said yesterday in a letter published in Pravda, the Communist Party daily newspaper.

In his inaugural speech to the central committee last November, Mr Yuri Andropov, the new Soviet leader, confessed that he had no simple or ready solutions to the country's pressing economic problems and urged those who did to come forward with letters to the news-

papers and party organs to reveal shortcomings and suggest solutions.

Since then, hardly a day has passed without the Soviet version of the "Yours truly, deeply concerned, Dnepropetrovsk" type of letters flooding into newspaper offices and receiving prominent display.

This latest, from the lorry drivers, urges the workers and managers of state fleets to take a tougher line against drivers who turn up drunk, waste their

time pottering around the garage looking for non-existent spare parts, or roar out of the garage with a full tank and spend their day moonlighting, taking their wives and girlfriends shopping or merely snoozing in the cab in a quiet side-street.

What the letter did not mention was the need for a more effective management system which would reduce empty return journeys or for the manufacture of more small delivery vans which would limit

the need to send a five-ton lorry to deliver a box of groceries.

A lengthy accompanying article on rural roads, or rather on the absence of rural roads and the need to build more of them quickly and cheaply, further underlined the point that Soviet transport problems are not entirely the fault of lazy or drunken drivers.

Sixty years after the foundation of the Soviet state, vast areas of the country are still served by the same rutted,

muddy and unpaved tracks that were no problem for Genghis Khan and his horsemen but bogged down both Napoleon and Hitler. Today, they ensure that a significant proportion of Soviet agricultural produce never leaves the fields and that as much grain falls off the side of a lorry as is imported from abroad.

These tracks also help to ensure that four times as many Soviet workers are employed repairing lorries as are employed making them and that

the average life of a Soviet tractor is less than five years.

Pravda revealed that more than 600,000 km of paved roads are required to end the isolation of rural communities in the Russian Federation alone, the largest of the 15 Soviet republics.

Given the shortage of building materials, asphalt and labour, said Pravda, it was up to local administrative authorities and collective farmers themselves to think up new ways of using cheap locally-available materials to do the job.

E. German economy grew 3% last year

By Leslie Collett in Berlin

EAST GERMANY'S economy grew by 3 per cent last year, failing to achieve the 4.5 per cent target, but nevertheless growing at a faster rate than most other countries in both Eastern and Western Europe.

This year it has again set an ambitious target of 4.2 per cent growth. However, East Germany will no longer be able to reach the planned 5.1 to 5.4 per cent rate of annual economic growth for the current five-year plan ending in 1985. It will be regarded as a success if the economy reaches growth of 3 per cent this year.

Last year's fall in the growth of national income (roughly GNP less services), which had risen by 5 per cent in 1981, was the result of a stringent policy of forcing exports to the West to new heights while slashing imports by 22.6 per cent—not including trade with West Germany.

The East German statistical office said the country last year, achieved a surplus in its trade with Western countries which went towards reducing East Germany's debt to the West.

West German experts on the East German economy say the reduction in debt to the West—\$800m to \$5.5bn—plus short-term supplier credits in mid-1982 was the desired outcome of the radical reduction in imports. However, it deprived the economy of essential imports, such as fodder, which took their toll in reduced production.

Industrial production rose by 3.2 per cent last year, one of the best results in the world. The target for last year was a 4.6 per cent rise.

Labour productivity increased by 3.6 per cent, compared with a goal of 4.5 per cent. The net monetary income of the population rose by 3 per cent instead of the 4 per cent planned and average monthly industrial wages rose to DM 1,075 (£290).

The increase in retail trade turnover, another indicator of the standard of living, was less than 1 per cent against the planned growth of 4 per cent. This reflected the sharp deterioration in supply of food and consumer goods for most of last year.

The statistical office noted that 40 per cent of all East German households now have cars, while 90 per cent have refrigerators, 93 per cent televisions sets, and 84 per cent washing machines.

James Buxton in Rome interviews Italy's controversial new Treasury Minister

Fanfani's youngest man tackles the economy

WHEN Sig Amintore Fanfani, Italy's 74-year-old Prime Minister, was forming his cabinet at the beginning of last month, the key appointment was obviously that of the Treasury Minister, in charge of economic management. After all, the new Government's raison d'être is to deal with the most difficult economic situation Italy has faced for years, and the previous incumbent, Sig Nino Andreatta, was not to be re-appointed.

The finding was that Sig Fanfani would appoint one of a tiny number of experienced men who had filled the post with some distinction in the past, or even bring in a venerable former governor of the Bank of Italy. But in fact he named Sig Giovanni Goria, who, at 39, is not only the youngest man in the cabinet, but had never been a minister before. Few people outside politics had ever heard of him.

Since then, Sig Goria has put forward a package of economic measures which have been criticised by almost everyone and greeted with a seemingly unending series of small public demonstrations. Serious doubts have been voiced as to how long the Government can survive.

The Government needed—and promised—to rein back urgently Italy's public sector deficit which last year closed at a record L71,000bn (£33.3bn) against a targeted L50,000bn and which threatened, if unchecked, to go up to L112,000bn this year—17 per cent of gross domestic product and the motor of Italy's 16 per cent rate of inflation.

Transport

Early this month, the Government announced the last of a series of decrees which ought to reduce the deficit by L15,000bn, mainly by raising taxes and charges for the state-provided services such as public transport, but partly by cutting health and social security spending.

These come on top of decrees introduced by the former government of Sig Giovanni Spadolini last July and of those included in the finance bill, stranded in parliament until this week.

If everything were to go through parliament intact, which is almost inconceivable, then this year's deficit is calculated by the Treasury to come

out at the same level as last year's—L71,000bn—which would be a significant drop in real terms.

Meanwhile, the Treasury is so short of cash that it has had to request parliamentary permission for a one-year loan at a nominal interest rate from the Bank of Italy, because it has exceeded its borrowing limits there. This is widely seen as a way of getting round the fact that since mid-1981 the Bank of Italy has no longer been under obligation to buy treasury bills which the Government cannot sell to the public.

But if all this daunts Sig Goria, it does not show. He remains calm, hard-working and pragmatic. To those qualities he owes his dramatic rise to prominence, as well as to a convenient turn of events in the leadership of his Christian Democrat Party.

Sig Goria qualified as a junior accountant and served in Rome as a deputy from 1976, where he devoted himself to studying the chaotic system of government finances—an essential preparation for his current post. He was a junior economic minister for a time and then led the economic team of Sig Ciriaco de Mita, who became

Christian Democrat leader last May and has been identified with a call for much greater toughness in the management of the economy.

Yet some of the harshest opposition criticisms of the new Government's measures are that they are not tough enough. Sig Goria disagrees. "If you look at the scale of what we are doing you can see that this is the most important manoeuvre of its kind since the war. One can argue endlessly about the estimates of the figures but we have to go on the figures we've got."

Pensions

"Yes, we would have preferred to do more actual cutting, but government expenditure is very rigid. Sixty per cent is wages, pensions and transfers to local authorities, which we cannot control. Fifteen per cent is interest payment. There are other things that can't be cut. The effective scope for cutting is just 2 per cent or 3 per cent of the total."

"By cutting the deficit, we will reduce inflation—the target for this year is an average of 13 per cent and we hope the

monthly rate will be down to 10 per cent by the end of 1983. That will sharply cut the cost of servicing our debt, and the current account balance of payments deficit will come down a lot as a result both of the cut in internal demand and these measures should bring and our plan for keeping down the cost of labour. That should make it possible to hold the parity of the lira, which is currently near the top of its spread in the European Monetary System."

The key problem for Sig Goria, in common with most other Italian Ministers, is that they have responsibility without enormous power. The Treasury, as he acknowledges, has little control of spending—its major responsibility—and its management of the Economy is shared with two other ministries, the Ministry of Finance, for taxation, and the Ministry of the Budget and Planning.

In the circumstances, the fact that Sig Goria does not yet carry immense personal political weight may not matter. What is important is that he shows no sign of being rattled by what at present is close to being an impossible job.

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— in millions of US-Dollars —	1981/82	1980/81	1979/80
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Loans and advances to customers	5.162	4.071	3.093
Credit volume	7.694	5.994	4.563
Liabilities to banks	7.943	6.294	4.990
Capital and reserves	161	147	126

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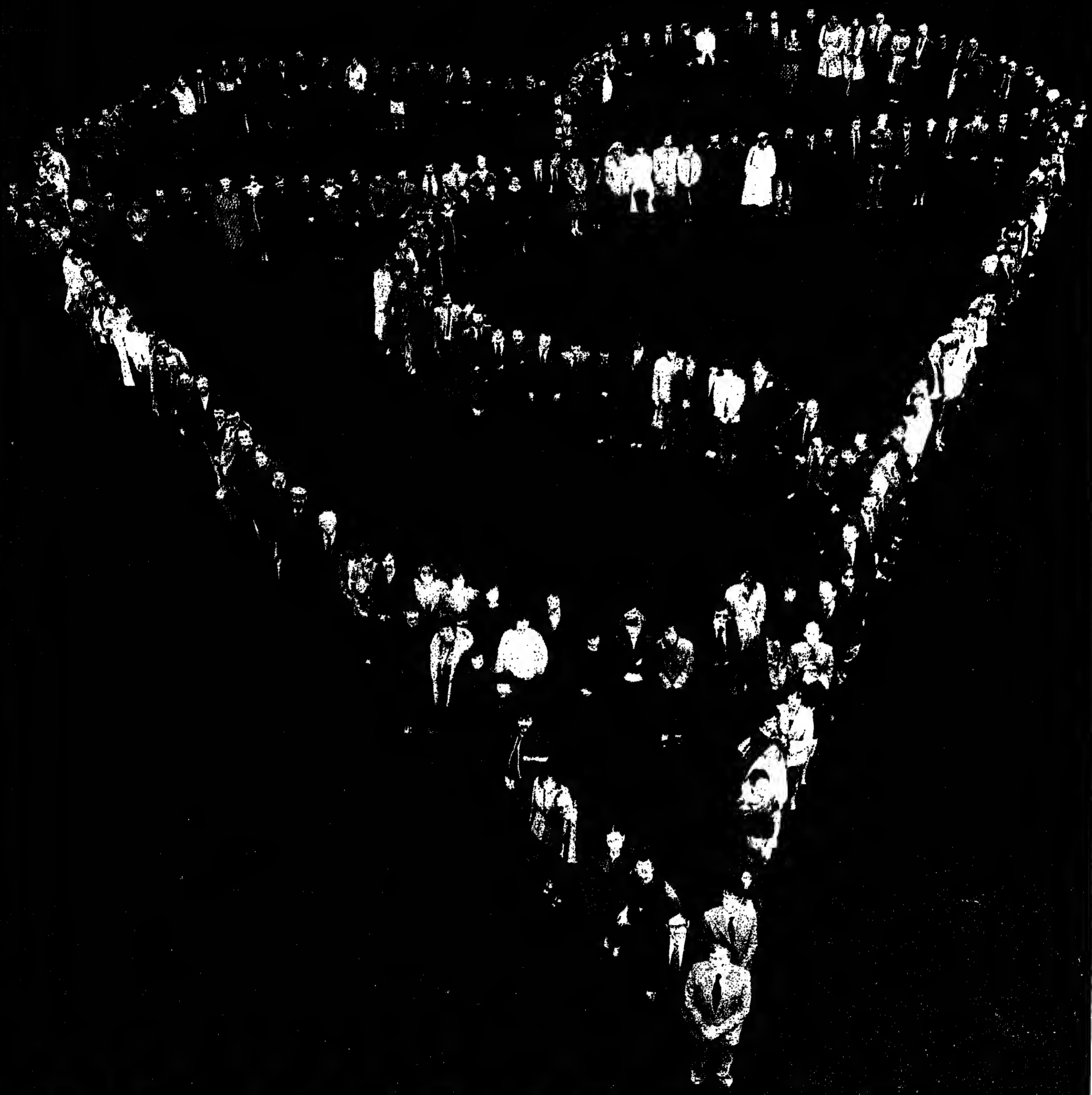
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UK NEWS

Lloyd's to hear Posgate plea on suspension

BY JOHN MOORE

THE RULING council of Lloyd's of London, the insurance market, moved yesterday to suspend Mr Ian Posgate, the former underwriter of the largest Lloyd's insurance syndicate. But before a formal decision is made by the council on his suspension Mr Posgate is to be allowed to argue his case before a Lloyd's sub-committee.

In a statement last night, Lloyd's said its council yesterday studied a memorandum "of allegations" against the conduct of Ian Posgate as an underwriter and member of Lloyd's. The council heard at length Mr Posgate's rebuttal of the allegations.

It decided "by the unanimous vote of those present" apart from Mr Posgate, who is a member of Lloyd's ruling council, "that the allegations were such as to require consideration of the exercise of its powers under the administrative suspension by-laws."

Lloyd's added: "Before a formal decision as to suspension is made, Mr Posgate is entitled to further representation as he may wish. If he so desires, any oral representation will be heard by a sub-committee appointed by the council."

Lloyd's is moving with extreme caution against Mr Posgate, who in his last full year of underwriting at Lloyd's earned £361,200, estimated to be the largest remuneration in the City of London.

Last week, the High Court ruled in Mr Posgate's favour that Lloyd's

"acted outside its powers" in suspending him last September.

Then, the suspension decision was taken by the committee of Lloyd's, the ultimate ruling body of the market until the beginning of this year.

But legislation promoted by Lloyd's, which has just come into force, has created a Lloyd's ruling council, made up of the 18 members of the committee of Lloyd's, including Mr Posgate, who sits on the Lloyd's committee, eight external members of Lloyd's, and three outsiders, with no connection with the Lloyd's market. That council has wider legislative powers than the previous ruling body.

Mr Posgate's suspension by the Lloyd's committee last September followed allegations by Alexander and Alexander Services, the U.S. owner of Alexander Howden Group, where Mr Posgate worked, that he was involved in a series of financial irregularities with four other Howden directors. Mr Posgate was dismissed by Howden's American owners and he is suing for wrongful dismissal.

Mr Posgate was hoping to return to underwriting with his own underwriting agency company, Posgate & Denby, where he speaks for more than 60 per cent of the shares.

Lloyd's said yesterday that Posgate & Denby had informed the council that it wished Mr Posgate to "recommence underwriting on their behalf, but would not authorise him to do so without the concurrence of the council."

Labour resumes attack on boundaries

BY RAYMOND HUGHES, LAW COURTS CORRESPONDENT

AMID INCREASING speculation that Mrs Margaret Thatcher, the Prime Minister, may call a general election in June this year, leaders of the Labour Party yesterday renewed their legal attack on proposed changes in English parliamentary constituency boundaries. The changes could have a marked effect on the outcome of an election.

Conservatives are likely to gain most from the redrawing of the political map - experts believe it could cost Labour about 30 parliamentary seats. The Boundary Commission was authorised to take account of changes that have taken place in the size of constituencies as a result of shifts in population.

Mr Michael Foot, Labour leader, and three senior party officials yesterday asked the Court of Appeal to overturn the refusal of the Queen's Bench Divisional Court last month to grant orders stopping the Bound-

ary Commission for England presenting a report containing its proposals to the Home Secretary. The appeal is expected to last about three days. If, as is likely, the case were then to go to the House of Lords, there would be a serious doubt about whether, assuming Labour lost before the Law Lords, it would be administratively possible for the proposals to be implemented in time for a June election.

Given the advantage the Conservatives would gain from the boundary changes that factor may be expected to figure largely in Mrs Thatcher's calculations about when it would be best for her to seek a new electoral mandate.

The Divisional Court judges ruled that the multiplicity of complaints made by Labour about the way the Commission went about its task of redrawing constituencies were ill-founded.

Lord Justice Oliver also expressed the view that the Labour leaders had, in legal terms, "no sufficient interest" - as citizens, electors or prominent members of a large political party - to entitle them to challenge the Commission.

The judge said that it was not a case where the court should interfere with or impede parliamentary debate on the matter, and that, in any event, Labour had delayed too long before making the challenge, which would in itself be enough to defeat the claim.

Yesterday Mr John Melville Williams, QC, for Labour, said there were two thrusts to his argument. First, the Commission was required to create constituencies as near the electoral quota - currently 65,753 - as practicable, which involved an objective standard the Commission failed to achieve.

Second, the Commission had a

discretion, where there were "excessive disparities", either between neighbouring constituencies or in relation to the electoral quota, to create constituencies crossing local authority boundaries. That discretion, which also involved an objective test, had not been exercised.

Sir John Donaldson, Master of the Rolls, said the contrast between objective and subjective might be misleading. The central question, he suggested, might be whether the Commission had gone so far beyond what was reasonable that it had not conformed to the rules under which it had to operate.

Sir John added that it was important that electors should understand the case, and he did not think they would understand the difference between objective and subjective tests.

The hearing continues.



Michael Foot: court plea

Standby plans for water stoppage

WATER WORKERS' unions and employers will attend talks today with the Advisory, Conciliation and Arbitration Service in an effort to avert an all-out national strike in the industry from Sunday night and disruptive industrial action from tonight over a pay dispute.

The Government is expected to bring to full readiness its long-prepared contingency plans for dealing with the effects of a national water strike, including the use of about 8,000 troops to take over strikers' work.

Conservatives ahead

THE Conservative Party has improved its standing since the 1979 election among men, trade unionists and in the south of England, according to the latest opinion poll from Mori (Market and Opinion Research International).

The Conservatives are shown with 44 per cent support, against 42 per cent in December. Labour has 35 per cent, the same as previously. The Social Democrat Liberal Alliance has slipped from 21 to 20 per cent.

Rubbish power

BRITAIN'S first rubbish-fired power station is to be built at Corby in Northamptonshire. The £30m plant will burn up to 350,000 tons of domestic refuse a year to provide electricity and heating.

The plant is to be built by a consortium including Corby Council, British Steel and GEC. At full output, it will provide more than 18 megawatts of electricity and 40 megawatts of heat, and should be operating by the late 1980s.

Campaign starts

AN advertising campaign costing £15m is being launched today to find more than 400,000 places for young people on the Government's new youth training scheme.

The scheme, itself costing £10m, will offer year-long programmes of training, work experience and further education.

Tourism review

MR IAIN SPROAT, minister in charge of tourism, said yesterday it was time to overhaul the Government's tourism policy guidelines of 1974, when it was decided to place more "emphasis on" promoting places away from the main tourist centres.

Lloyd's sets out disclosure rules

BY OUR CITY CORRESPONDENT

WORKING UNDERWRITERS in the Lloyd's of London insurance market will have to disclose the benefits they receive from their associations with companies with which they transact business.

But how much financial benefit the underwriters receive from their shareholding links with insurance or reinsurance groups with which they are trading is likely to remain largely confidential with the Lloyd's ruling authorities.

Mr Ian Hay Davison, who starts work next month as the first chief executive of the Lloyd's insurance market, announced the new proposals which have been prepared by a working party under his leadership over the last two months.

Under the new proposals, underwriting agents, which look after the affairs of all Lloyd's underwriting members, will be required to maintain a register at their business ad-

dresses of their own disclosable insurance interests and those of their employees, partners or close connections.

Access to this register will be restricted to members of the Lloyd's ruling council, the Lloyd's committee and auditors. The interests "would be quantified."

In moves designed to stamp out abuse in the Lloyd's market arising from conflicts of interest, the Davison working party has insisted on full disclosure of interests to a central register at Lloyd's.

Members of Lloyd's will not be able to study the relationship of underwriters and the links which those underwriters have with other companies, unless the underwriters act on behalf of the members of Lloyd's.

Mr Davison said yesterday, "I think it is going too far to invading personal privacy to make the quan-

tum (of benefit) public." He said that the register had been modelled along the lines of the register of business interests of Members of Parliament at the House of Commons.

Accounts of Lloyd's underwriting syndicates, the units into which all Lloyd's members are grouped, will be required to disclose material interests in a "fair" way. Underwriting agents who introduce members to Lloyd's syndicates but who do not manage those syndicates will be required to show all material interests of his agency company.

An interest of less than 5 per cent in a quoted company is exempt under the new rules. And "a special case may be pleaded by any underwriting agent providing full particulars are disclosed to Lloyd's and providing the syndicate auditor is consulted."

Lex, Page 16

Interest declines in North Sea blocks

BY RAY DAFTER, ENERGY EDITOR

NORTH SEA companies have turned their backs on many of the oil exploration areas offered by the UK Government and have concentrated their bids on possible gas-producing concessions.

This became apparent yesterday when the Energy Department announced initial details of the oil industry's response to its eighth round of offshore drilling licences. The number of applications was well down on the previous round of licences.

The Department said it had received 60 applications for the 184 blocks on offer. In the previous round, the Government received twice as many applications.

The Energy Department said it still hoped to be able to license about 85 blocks in line with its official target. Officials yesterday began analysing the bids.

It is known that many of the 60 applications contained multiple bids covering several different blocks. As usual, there was also a good deal of overlapping, with a number of consortia bidding for the same blocks.

The Department said that 20 of the 60 applications involved cash tenders for auctioned blocks. On that basis, it seems unlikely that the Government will be able to license all of the 184 blocks open to cash offer. It is thought that many of the applications related to a few, favoured concessions.

Oil companies said yesterday that it was unlikely that the cash tenders would be very high - in many cases amounting only to several hundred thousand pounds. They pointed out that the industry had already had an opportunity of "buying" the concessions for a fixed price of £3m a block in the previous licence round. As a result, the Government may be fortunate to raise more than £10m-£20m from the auction of the 15 blocks.

It is thought that most of the interest in the eighth round has been centred on the 38 blocks on offer in the southern sector of the North Sea, off Yorkshire and Lincolnshire. This is predominantly a gas-producing region where exploration activity has dwindled in recent years.

Companies said yesterday that they were now more willing to explore in this area, given the knowledge that British Gas Corporation will need new supplies in the late 1980s. Prices paid for any gas found will almost certainly be very much higher than they have been in recent years.

Companies have also become more interested in gas exploration because, under recent legislation, they have been allowed to market "the fuel themselves." In the past, British Gas had the monopoly right to buy North Sea gas.

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Spending in shops rises 6%

BY MAX WILKINSON, ECONOMICS CORRESPONDENT

A MODEST BOOM in UK shop spending during December pushed the volume of trade to 8 per cent above its level a year earlier, according to official figures released yesterday.

Provisional estimates by the Department of Trade show that the consumer boom in December helped to raise the volume of retail sales for the last three months of the year to a level 4½ per cent higher than a year before.

For 1982 as a whole, it is estimated that the shops did 2½ per cent more business in real terms than in the previous year.

Shop spending, which accounts for nearly half of all consumers' expenditure, is thought to be the most likely engine for the modest economic recovery which most forecasters are predicting this year.

Earlier hopes that economic recovery could be led by exports, or by a revival of industrial invest-

ment, appear less sanguine than a year ago. The 12 per cent depreciation of the effective exchange rate of sterling since the beginning of November should help to make British goods relatively more competitive.

On the other hand, tight consumer markets in other countries may prompt importers to bang on to their market shares in the UK by holding down sterling prices at the expense of profit margins.

The prospects for consumer spending in the UK are delicately balanced. During the recession, consumers' spending has held up better than predicted because people reduced the proportion of their incomes which went into savings.

The ratio of savings to income is at an exceptionally low level. It is not thought likely that a substantial further increase in spending could be financed at the expense of savings.

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Top changes at British Shipbuilders

BRITISH Shipbuilders, the state-owned group, is reshuffling top management in preparation for the departure of three key executives later this year.

Mr John Parker, head of merchant shipbuilding, is leaving to run the Harland & Wolff yard in Belfast; Mr Kenneth Griffin, deputy chairman and Mr William Richardson, head of warship yards, are also going.

Mr Parker's successor will be Mr Herbert Rice, at present managing director of Sunderland Shipbuilders, while Mr Geoffrey Fuller, former director of naval shipbuilding at the Ministry of Defence succeeds Mr Richardson. A successor for Mr Griffin, who was once tipped as a possible chairman for the National Coal Board, has not been named.

Mr Rice will also become chairman of Swan Hunter, the Tyneside merchant and naval yard.

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NOTICE OF OPEN INTERNATIONAL CALL FOR TENDERS

NUMBER 46.01.83

An open International Call for Tenders is being launched with respect to the supply of:

— Machine-made paper and cardboard.

Interested companies may obtain the specifications relating thereto from the following address:

— SNED — Unite Papeterie (Stationery Unit) — 8, Rue Mohamed Arezki Ben Bouzid les ANASSERS, Alger (Algeria); for a sum of 200.00 DA.

Offers must be filed within 45 days from the date on which the present notice is published.

Offers must be sent by post to the above address in a double sealed envelope.

The outer envelope must be completely anonymous, bearing no information which might identify the company.

The said envelope should bear the following wording only:

"SNED" — Unite Papeterie — 8, Rue Mohamed Arezki Ben Bouzid les Anassers — Alger "Avis d'Appel d'Offres International No 46.01.83 pli confidentiel" — A ne pas ouvrir — DDP Service des Marches (SNED — Stationery Unit) — 8, Rue Mohamed Arezki Ben Bouzid — les Anassers — Algiers "Notice of International Call for Tenders No 46.01.83, confidential" — do not open" — please forward to Contracts Department.

Tenderers shall remain bound by their offers for a period of 120 DAYS.

Offers must be accompanied by the following documents, or they will be declared null and void:

— Articles of Association of the company.

— Declaration to be signed.

— Bid.

— Fiscal status in Algeria and in the country in which the company's head office is located.

— Latest balance sheet.

— List of main shareholders and partners.

— Declaration that the company does not have recourse to intermediaries, in accordance with Law No. 78-02 dated 11 February 1978, relating to State monopoly on foreign trade.

Industry raises the roof to avoid taxation

By Robin Pandy

A GROWING number of companies are removing the roofs from their buildings or demolishing them, encouraged by the Confederation of British Industry, to avoid local authority rates (property taxes) on void property.

Mr John Owen, group managing director of Rubery Owen, said the company was saving £300,000 a year by removing the roofs or demolishing about 300,000 sq feet of factory space at Darlaston, Staffordshire. "One of the chief motivating factors was the void rating system," he said.

Other examples, published by the CBI, include:

- Dupont, in the West Midlands where the roof is being removed from 800,000 square feet of property not producing any income. The saving is £200,000 and one of the premises was only a few hundred yards from the district authority boundary; on the other side was a council which did not exercise its right to charge rates on empty properties.

- Plessey Telecommunications, Liverpool, saved £54,000 in rates and £150,000 in insurance, heating and other costs by knocking down seven buildings covering 140,000 sq feet.

- Lea Lohian warehouses in Central Scotland, saved £40,000 by building a wall across its 140,000 square feet warehouse to halve its annual rates bill while only half the storage space was needed.

Mr Bryan Rigby, CBI deputy director general, has urged the Government to consider four points to alleviate the problems of rates for commerce and industry which will pay a total of £50b in 1983-84. They are: a limit on business rate increases; partial business rate; abolition of the empty property business rate; and rates relief for premises mothballed during the recession.

There are no signs at the moment that the Government is prepared to accept any of these proposals.

SALARY INCREASE AFTER 'PASSABLE' GROUP PROFITS

£101,900 pay rise for BOC's chief executive

By RAY MAUGHAN

MR RICHARD GIORDANO, the American lawyer turned industrialist who runs BOC Group, confirmed his position at the top of Britain's income league yesterday with a salary increase of £1,950 a week in the year to September 1982.

The industrial gases, welding equipment and health care group gave him a rise of £101,900 last year to bring his gross annual salary as managing director and chief executive, up to £579,000, or £11,135 each week.

Boardroom salaries at BOC climbed from £176m to £2,03m which was shared between the 13 main board directors. Sir Leslie Smith, the chairman, received a £1,000 salary increase to lift his annual earnings to £122,000.

Executive remuneration, BOC explained, is decided by a compensation committee of the six non-executive directors and is made up of basic salary, bonus payments and currency adjustments for that year.



Mr Richard Giordano

Last year BOC pushed up profits by £1.1m to £102.6m for a performance which the group said was "passable but not terribly exceptional." Total group employment was cut by 9 per cent to 38,370 people and the UK wage bill was reduced by £5.5m to £106m.

Mr Giordano sold 4,620 shares in the company last year and now holds 84,098 shares. He has, however, recently received the right to buy 400,000 BOC shares at 200p each between 1986 and 1989 under the senior executives shares option scheme. The share price dropped 8p to 170p last night.

Mr Giordano, who is 47, took over at BOC in 1978 after the British group took over the American company Airco, where he was president. In the year to September 1981, when BOC increased its profits by £31m to more than £94m, Mr Giordano was awarded a salary increase of more than £200,000 a year. A company spokesman said then: "It is a reward for success. There is no question of having to justify it. Mr Giordano is worth the money."

Lex, Page 18; Company news, Page 28

Idle ships again at record level

By Andrew Fisher

THE GRIM state of world shipping was further underlined yesterday by figures which showed that idle tonnage at the end of November last year, the latest figure available, was 81.5m deadweight tons - again the highest on record.

This figure, calculated by the General Council of British Shipping for the end of November, was nearly 2m dwt up on the October 31 level

Idle World Tonnage (m dwt)			
	Dry	Tanker	Total
Dec 1980	2.2	7.0	9.2
June 1981	1.3	15.4	17.3
Dec 1981	2.8	24.6	27.4
June 1982	6.5	52.8	59.3
Nov 1982	22.5	59.0	81.5

Source: General Council of British Shipping

and represented some 12 per cent of world shipping.

It was the sixth month running that laid up tonnage had been at a record level. The bulk of the ships affected were tankers but dry cargo ships are now forming a larger proportion of the total.

The end of November figure comprised 59m dwt of tankers (17 per cent of world tonnage) and 22.5m dwt of dry cargo vessels (8 per cent). At the start of last year, the total was 27.4m dwt, including 24.8m dwt of tankers.

The volume of world shipping laid-up is nearly nine times the 9.2m dwt recorded at the end of 1980. Freight rates remain near rock-bottom levels.

Since then, the tanker crisis - reflecting lower fuel demand in the recession and changed market patterns which have made many big ships outdated - has worsened and other sectors have also run into trouble.

The problems of the shipping industry have, in turn, spilled over into shipbuilding, with world yards struggling to win new business as their order books shorten.

Fleets with the most idle tonnage at the end of November were those of Liberia, a flag of convenience country, with 19.8m dwt affected, mostly tankers. Greece with 19.7m dwt, and Norway with 11.4m dwt.

TAX LOOPHOLE UNLIKELY TO BE CLOSED IN BUDGET

Cash pours into 'roll-up' funds

BY CLIVE WOLMAN

HIGH-RATE UK taxpayers have been investing money in "roll-up" offshore funds in increasing amounts over the past few weeks. There are growing signs that the tax loophole from which the funds benefit is unlikely to be closed by the budget in March.

Rothschild's Guernsey-based Old Court International Reserves, the largest such fund, saw its deposits rise from £178m at the end of September to £271m two weeks ago. After a further inflow, its deposits are now worth almost £300m.

Lazard's Sterling Reserve fund, officially managed in Jersey, has soared from £28.5m in early October to £53m at the end of last week. Smaller funds have marked up even larger percentage increases. Hill Samuel's currency fund, for example, has nearly trebled in size over the last three months to reach £23.75m.

The major selling point of all the funds, whether they hold deposits in sterling or in foreign currency, is that they "roll-up" their clients' investment income into capital gains by ploughing back the accrued interest into the fund to push up its value.

The Inland Revenue backed away from a legal confrontation in September, after issuing threats for three years. Since then, individual depositors have been exempted from paying tax on the interest and are subject only to capital gains tax.

With the taxman now adjusting capital gains for inflation, this represents an effective tax rate of between zero and 10 per cent only, instead of the 45 to 75 per cent rate on investment income.

Fears that the Inland Revenue intended to strengthen its powers in this year's Finance Act were assuaged last month, when a government consultative document on proposals to clamp down on international tax avoidance failed to mention offshore roll-up funds. Nor has the Government resorted to the traditional method of warning of an impending closure of a tax loophole - by answering a pre-arranged parliamentary question.

Mr Malcolm Gamble, head of the national tax office of accountants Thomas McLintock, said: "If they were going to give advance warning, they would have done so by now, only two months before the budget."

Mr Charles Potter, QC, a specialist in tax law, said it would be difficult for the Government to draft legislation against the offshore roll-up funds without also harming investors with shares in overseas trading companies, or even in British companies with overseas subsidiaries.

Mr Potter said that the crucial Section 478 of the 1970 Income and Corporation Taxes Act, which deals with overseas investment, had already been tampered with since 1981 to reverse a court decision against the Inland Revenue. The Government might be reluctant to attempt to tighten it again.

No one doubts that the Government will be compelled eventually to act. "At the moment the tax loss is small," Mr John Kay, director of the Institute for Fiscal Studies, said. "But if anything is done, word will spread around and everyone - even grandmothers - will put their money into these funds instead of using their banks."

Inland Revenue officials will not discuss possible legislative changes. But press officer Mr Pat Lewis pointed out that the Government's policy was not to introduce retrospective tax legislation.

Switch to short-term job hire

BY OUR NORTHERN CORRESPONDENT

MANUFACTURING companies have been adopting the practice of offering three and six-month work contracts to skilled and unskilled manual workers as a way of managing the size of their labour force with short-term improvements in orders.

In engineering, this practice - which is designed to prevent the necessity of hiring new labour and then making workers redundant - has been met with reluctant acquiescence on the part of some officials of the Amalgamated Union of Engineering Workers.

It is unclear how widespread the practice is, and it might be confined so far to a very few companies. Some industrial and union leaders predicted yesterday, though, that such short-term contracts would become more popular to managers if manufacturing benefited from a jump in orders but for which long-term forecasts were still unpredictable.

The British Steel Corporation provoked an angry response from unions last week when it told them that redundant workers at its Hardopole pipe mill would be taken back on a contract basis when orders returned.

The main steel union, the Iron and Steel Trades Confederation, likened the move to "a return to serfdom" and is recommending workers today to reject the idea.

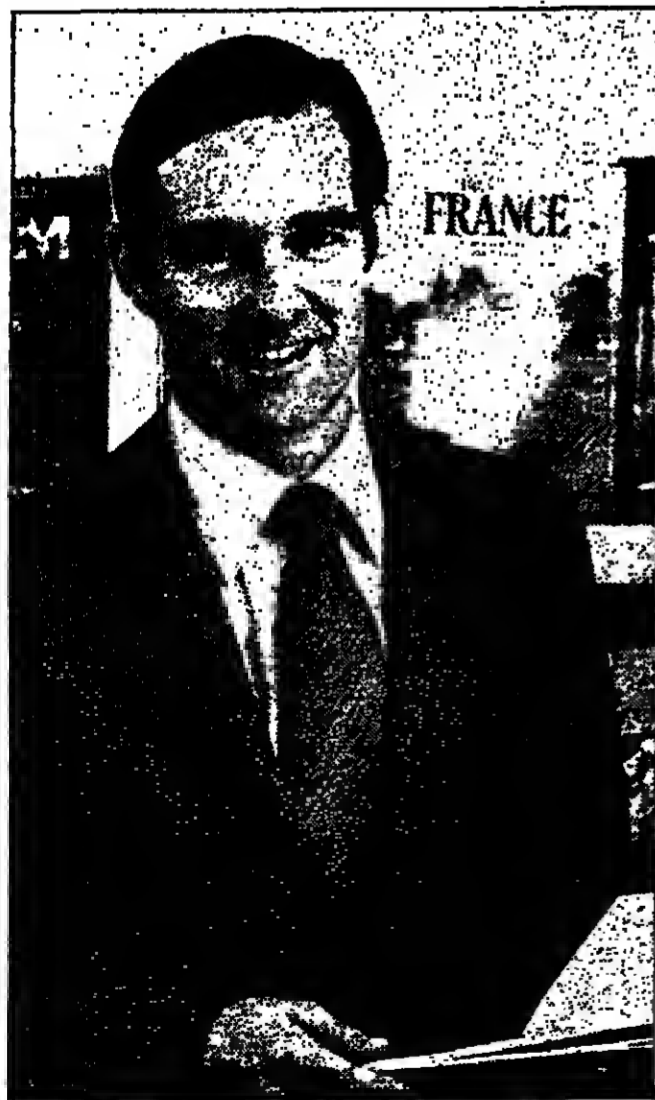
The engineering union in the North-west of England, which appears to have more companies offering short-term contracts than elsewhere, has been accepting short-term employment, where it believes this is the only way of obtaining jobs.

Mr John Tocher, divisional organiser for the union in much of the North-west said, however: "Unless we believe it is genuine we will not agree to temporary employment. It is one of the ills of the recession that has slipped in, but in some cases we have been misled by companies who are trying to casualise their workforce. It really is a dilemma for us."

One company in central Lancashire, which employed 800 at the beginning of last year, has taken on a further 100 workers since then, initially on a three-month contract followed by a further three-month contract with the prospect then of permanent employment.

A spokesman for the Confederation of British Industry's North-west region, said the practice was being used and discussed "very frequently" at CBI meetings. Use of overtime and varying short-time working were the usual means of coping with short-term surges in output.

What if you chose Hewlett-Packard as a computer partner?



In one year our HP 3000 systems have increased our efficiency by 25% and helped us to the top of a market we had only just entered!

- Val Lewthwaite, Division Manager, WHS Distributors, Leicester.

Since WHS Distributors, a division of W.H. Smith & Son Limited, was founded 10 years ago, it has become Britain's leading distributor of hardback books. In 1981, with orders reaching 10½ million books a year they entered an entirely new field - the distribution of travel brochures - and within 12 months, they had won a 20% share of this competitive market.

The rapidly escalating success of both these ventures is not unconnected with the coming-on-stream of two HP 3000 computers.

The first of these systems runs WHSD's uniquely comprehensive book operation. The system encompasses not only the logistics of distribution, but the marketing, sales, accounting, order-processing and stock management functions for some 5,000 current titles. In the past year, the introduction of the HP 3000's and productivity improvements have significantly reduced in-house order processing time.

The second HP system is dedicated exclusively to controlling the intricacies of the travel brochure business - masterminding the distribution of brochures to over 4,500 travel agencies throughout the UK as well as keeping hour-by-hour control of order-processing, stock control, and statistical information. In this time-sensitive business, up-to-the-minute data is essential and a valuable feature of the HP system is its ability to generate ad-hoc reports for tour operators at a moment's notice.

Says Val Lewthwaite: "To be in a position to challenge the market leaders only 12 months after entering the market is very gratifying. It's proved to us how adept the HP 3000 is in taking on highly specialised tasks alongside the traditional business functions."



"Since transferring personnel movement records on to the HP 3000, we've achieved tighter security, streamlined personnel deployment, improved flight scheduling and saved 3 hours admin. time per platform per day."

- Don Anderson, Platform Operations Manager, Conoco (UK) Limited.

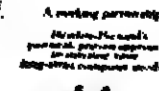
Any day of the year there are up to 300 people working on Conoco's Murchison platform. Of these, typically 50 will have just arrived and 50 will be just about to leave.

Traffic on such a scale in so remote an environment is a logistical nightmare. It also makes the statutory maintenance of Personnel-on-Board (POB) records an administrative burden.

So, in 1979-80, Conoco began development of a Personnel Movements Control (PMC) system based on their HP 3000 Series III computer in Aberdeen. It supports data-capture terminals on the platforms and at each end of the key staging posts, programmed for automatic badge-reading and for manual input.

The system has three main elements; a personnel detail file, a flight scheduling service and a continuously updated list of personnel on board. Among the practical benefits, the system allows the helicopter terminal in Aberdeen to schedule flights efficiently, based on accurate passenger and baggage details. Movements to Conoco's North Sea installations from Aberdeen have been simplified for those travelling. In an emergency, information on personnel involved can be provided within minutes - information that could save lives.

Don Anderson says "The system has been very well received - a credit to the HP 3000's user-friendliness. It has already awakened the interest of other North Sea operators."



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Hewlett-Packard in Great Britain

In 1981 Hewlett-Packard Limited had a turnover close

to £120 million which puts the company well into the top 500 Industrial companies in the UK. Employees now exceed 2,000, of whom more than half are in sales and customer support.

Worldwide, Hewlett-Packard Corporation has a turnover of £1,650 million of which approximately half arises outside the USA.

A working partnership

The Hewlett-Packard approach to its customers is based on a working partnership - one which starts with the definition of computational needs and continues with the provision of first-rate after-sales service. There is a choice of support options ranging from planning and installation, training, consulting and software support, through to hard-

ware maintenance and computer supplies. Hewlett-Packard has invested heavily in the provision of customer support centres throughout the UK. HP runs two major training centres at Manchester and Pinewood, near Wokingham, as well as engaging in extensive on-site training programmes.

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Tuesday January 18 1983

Belize still needs aid

THE FOREIGN and Commonwealth Office is being justifiably cautious about the remarks attributed last week to the military ruler of Guatemala to the effect that his country had scaled down its territorial demands on neighbouring Belize. General Efraín Ríos Montt says Guatemala wants only a fifth of Belize's land area rather than the whole of it.

Such a statement might seem to mark an advance, in reality it is hardly any advance. General Ríos Montt gave the impression that he was talking impulsively and the general, who seized power in a coup last March, may not stay at the top of the greasy pole of Guatemalan politics for much longer. In any case Guatemala has no serious grounds to claim an inch of Belize's territory.

The position of Belize is an unenviable one. After several centuries as Britain's colony in Central America the small, poor and thinly populated territory became an independent country in September 1981. It was recognised by all its neighbours except Guatemala and quickly accepted membership of the United Nations. With a population of 150,000 and pitifully few resources it was not able to mount the defence capability sufficient to deter a heavily armed Guatemala whose population was 50 times as large as its own. As a consequence Britain undertook to maintain a garrison of British troops in Belize for an unspecified period while a final accommodation was sought with its reluctant neighbour.

Frontiers

Despite a succession of talks involving Guatemalan, Belizean and British officials no formula has been found which would bring Guatemala to recognise Belize and its present frontiers and allow Britain to relinquish the task of defending Belizean territorial integrity. A new round of talks is to take place later this month at which the British and Belizeans must try and convince the Guatemalan representatives that their country's claims will not prosper and remain that they stand on the side of the law. The Guatemalans have seen themselves isolated at the UN when they pressed their claim last time. They must be told frankly that the interests of Belize to be isolated if they insist on pressing it.

While patient work continues on the diplomatic front the

practicalities of assuring the defence of Belize must be tackled. In this matter the U.S. occupies a key position. Earlier this month the Reagan Administration decided to resume shipments of weapons to the government in Guatemala City. The wisdom of Washington returning a regime which has as bad a political record as that of General Ríos Montt has already been questioned by U.S. legislators. The danger U.S. policy represents for Belize, a small but important oasis of democracy and constitutional government in a turbulent Central America, must be brought home more forcefully to Mr Reagan.

Guarantee

In London the open-ended nature of the British defence guarantee to Belize has given rise to some misgivings in the House of Commons select committee on foreign affairs. The fact that the Foreign and Commonwealth Office has not given Parliament the details of the Anglo-Belizean defence agreement has exacerbated that misgiving.

The unease at Westminster cannot be passed over. The response to it should consist in a new effort by the British and other countries friendly to the newly independent Central American country to recruit more countries to the force defending Belize's frontiers. Such a force was nearly established before Belize moved to independence. With Belize clearly recognised as a sovereign state the task might be easier this time. A multilateral force could operate under the aegis of the UN provided it is given the mandate to repel any Guatemalan aggression.

Fighting

As the tide of fighting rises in Central America — and nowhere in the region more dangerously than in Guatemala — the value of Belize as a haven of stability is increasingly clear. Belize's friends must be prepared to go to its assistance if it is threatened with attack by a force from its neighbour. It cannot be the interests of the U.S., the strongest power in the region, to see the tension between Guatemala and Belize continue. The defence of Belize's borders must be a demonstration that a country's boundaries cannot be changed except through the process of peaceful negotiation.

Managing the police

BRITISH PEOPLE have been rightly shocked by the circumstances in which London policemen shot and critically injured a man in Kensington last week. The event provokes the fear that Britain has taken an unwelcome step towards the gun-toting law and order methods which are associated with steadily worsening violent crime in many American cities. The main immediate public issue is not how the victim was incorrectly identified, in spite of sophisticated procedures, as a potentially dangerous fugitive, but why even if he had been the man in question officers involved failed to follow the force's perfectly adequate guidelines on the use of firearms. These state that shots should only be fired either in self-defence or to defend members of the public.

The answer to this question is presumably in the report which will be delivered today to the Director of Public Prosecutions. Mr William Whitelaw, as Home Secretary, was right to insist yesterday that until the DPP decides whether to engage in a criminal prosecution, further details cannot be made public in the interests of allowing the policemen a fair trial.

Unwelcome

If there is no prosecution, Mr Whitelaw has promised a full report. It may be appropriate at that point to decide whether, as the Opposition demanded prematurely yesterday, an independent figure should be involved in conducting the inquiry. Regrettably the new rules to provide an independent element in the police complaints procedures have not yet completed their passage through parliament.

For Sir Kenneth Newman, who is now in his fourth month as Commissioner of the Metropolitan Police, the incident is an unwelcome addition to the tally of errors or worse which have aroused public concern in the last year. Less sensational than the Buckingham Palace break-in and less complex than the corruption saga of Operation Countryman or the problems of policing the inner city, the

Kensington affair adds to the pressure for change.

As a newcomer, Sir Kenneth is in a position to make use of the public concern about these matters to lend weight to his arguments for re-organisation, which have recently been presented to Mr Whitelaw in a so far unpublished strategy document.

The common threads in all these matters are a loss of management and accountability. It is to be hoped that Sir Kenneth's report will avoid making the promise of improvement on either of these topics contingent upon a target force. The Met is closer to a high floor and, according to insiders at the Organisation for Economic Co-operation and Development, may be just the man to replace Emile van Lennep, the long-time secretary-general when he retires, probably next year.

McMahon has already built up considerable support for the international police circuit through his work on the foreign side at the Bank and his chairmanship of the OECD's working party there on the economic group which deliberates on balance of payments problems.

His blend of joviality and sharpness makes him a favourite among Europeans. And, most importantly, he would probably have the support of the Americans.

For McMahon's finest hour was in January 1981 when, with the Bank's chief cashier David Somerset, he flew to Algeria to help arrange the complex financial deal to free the U.S. hostages in Tehran.

Debated

The time has seldom been riper for these and other issues to be openly debated by Sir Kenneth and by the Home Office. Changes in the way the Met is run will not necessarily prevent shocking mistakes like the Kensington shooting, but they are capable of ridding the force of the sense of malaise which has surfaced too often in recent months.

THE ONSET of what promises to be the biggest trial of strength ever staged on the world's information processing market is prophetically symbolised by two new skyscrapers, soaring from adjacent blocks on Madison Avenue in midtown Manhattan.

On one corner stands the International Business Machines building, a glass-walled structure trimmed in bottle green. On the other, American Telephone and Telegraph's future headquarters, a stately pink granite pile topped off with a Chippendale pediment.

Significantly, perhaps, AT&T's offices are still under construction. But they already reach several feet higher than their next-door neighbour.

For the first time AT&T and IBM, the undisputed champions in their respective classes, are set to compete in the same league. The previously rigid barriers between the telecommunications and computer businesses have been erased by technology and by major changes in U.S. policy, leaving the two giants staring eyeball to eyeball.

Neither need feel constrained to put its punches. The Justice Department dropped its longstanding anti-trust charges against IBM a year ago, when it also settled its case against AT&T. The settlement removed restrictions which had previously stopped AT&T from venturing outside the regulated telephone business.

Both companies insist that they are not gunning for a showdown. "A confrontation with IBM won't happen," says Mr Archie McGill, vice president of business marketing at American Bell, the subsidiary which will spearhead AT&T's thrust into unregulated markets. "I have no interest in going head-to-head with IBM. Neither have they."

Yet their strategies are converging fast. AT&T clearly wants a share of the data processing market, a fast-growing Canadian market which will "translate" between different makes of computer and plans to sell a range of small computers and terminals which can handle both data and voice communications.

IBM, meanwhile, is broadening its span of telecommunications products. It is developing new private branch exchanges (PBXs) both on its own and in collaboration with Mitel, a fast-growing Canadian equipment manufacturer. It also owns a third of Satellite Business Systems, which operates an advanced satellite

communications network. After AT&T sheds its local operating companies early next year, it will be close to IBM in size. Each company is likely to have assets and annual turnover of more than \$300bn. But their outlook on the world and their relative strengths and weaknesses will be very different.

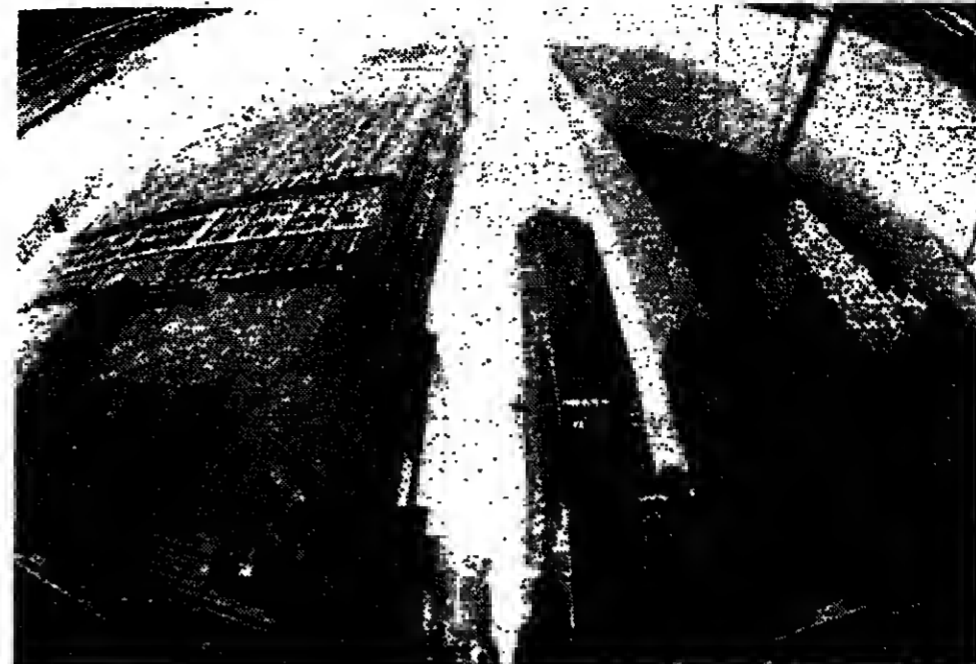
IBM, which today launches its personal computer in Europe, is

America's Communications Revolution: Part 5
IBM and AT&T: now it's eyeball to eyeball

By Guy de Jonquieres



Symbol of a trial of strength to come? The new headquarters of AT&T (left) are just across the street from IBM in New York



communications network. After AT&T sheds its local operating companies early next year, it will be close to IBM in size. Each company is likely to have assets and annual turnover of more than \$300bn. But their outlook on the world and their relative strengths and weaknesses will be very different.

IBM, which today launches its personal computer in Europe, is

a tightly integrated multinational which does almost half its business overseas. Its development and production facilities—which it has spent a staggering \$12bn to re-equip during the past five years—are spread across 16 countries. It has increasingly identified Japan's electronic industry as its chief adversary on world markets.

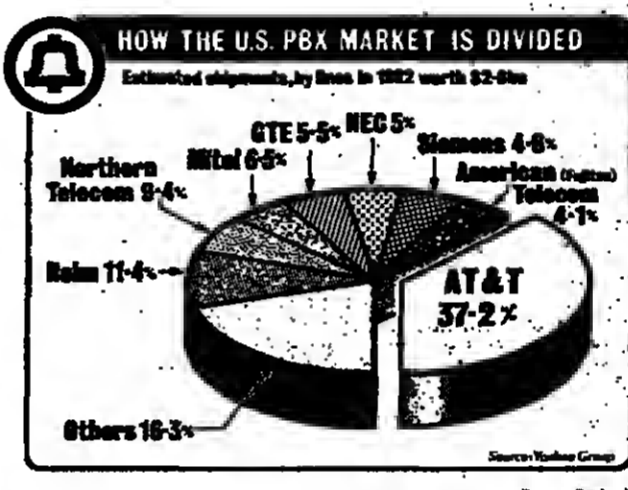
AT&T, by contrast, has dedi-

cated itself most of this century to operating its U.S. telecommunications system, which provides most of its revenues. It now recognises that the worldwide nature of the information processing business makes an international profile imperative. It is seeking to expand abroad through link-ups with foreign partners, notably the Dutch Philips group.

Starting from scratch, AT&T is also free to experiment with unorthodox strategies which IBM cannot take without straining the loyalty of its customers.

It is too early yet to say which of the two contenders packs the heavier punches, or precisely where they will land. Many observers believe that they cannot long avoid tangling with each other. But another intriguing possibility also exists: that in the easier anti-trust climate now prevailing in the U.S., the two may seek mutual accommodation in some fields.

Competitors are jostling for a share of the market



It is quite possible, for example, that American Bell and Western Electric may compete to sell similar products through the same distributor. That distributor may also be selling equipment made by independent manufacturers which are also supplying American Bell.

No sector of the subscriber equipment market is more

seriously contested than sales of PBXs, worth more than \$3bn last year. Once dominated by AT&T, it has increasingly been overrun by a horde of other companies including Rolm and GTE of the U.S., Mitel and Northern Telecom, Japan's Fujitsu, Nippon Electric and Hitachi, West Germany's Siemens and L. M. Ericsson of Sweden.

Last year, AT&T is estimated to have supplied less than 40 per cent of new PBX lines installed in the U.S. It now accounts for less than 20 per cent of the total number of lines in use, compared with about 80 per cent in the early 1970s.

The slippage is largely due to lack of competitiveness. AT&T offers PBXs based on traditional analogue technology which are less advanced than the newer digital systems supplied by many competitors. Moreover, it has only leased equipment in the past, and the sales prices charged by its rivals have fallen to as little as three-and-a-half times AT&T's annual rental.

AT&T's competitors have benefited, too, from the backwash of recent sharp increases in its rentals for older switchboards. AT&T may also have deliberately allowed its market share to slip, both to appease anti-trust enforcers and to bolster its demands for freedom to compete on equal terms.

With the Government anti-trust case out of the way, it will be able to fight back more aggressively and is expected to launch a digital PBX earlier this year.

The Yankee Group, a Boston market research firm, believes that the U.S. PBX market will remain strong, growing to \$8bn a year by 1985.

The need to span the board range of skills and technologies needed for office automation is increasingly pushing companies into tactical alliances. Mitel plans to launch a network with American Satellite, itself a joint venture between Continental Telephone and Fairchild Industries.

In another part of the forest, Digital Equipment is collaborating with Xerox, the copier giant and Intel, the semiconductor manufacturer partly owned by IBM, to promote a joint standard for an office communications network known as Ethernet. Whether the market will be big enough to accommodate all these competing approaches remains to be seen.

Previous articles in this series appeared on January 10 and 17 on this page and on January 14 and 17 on the management page. The next article will be published tomorrow.

Men & Matters

Paris prospect

Having been denied the top spot at the Bank of England, deputy governor Christopher "Kit" McMahon may be beckoned to a job in Paris that would provide rich governance.

Deputy governors at the Bank traditionally are content to sit out of the limelight and have little aspiration to higher rank. Leslie O'Brien, who took over the chair in 1966 after working his way up through the ranks to deputy governor, was the exception.

But McMahon is clearly a high flier and, according to insiders at the Organisation for Economic Co-operation and Development, may be just the man to replace Emile van Lennep, the long-time secretary-general when he retires, probably next year.

McMahon has already built up considerable support for the international police circuit through his work on the foreign side at the Bank and his chairmanship of the OECD's working party there on the economic group which deliberates on balance of payments problems.

His blend of joviality and sharpness makes him a favourite among Europeans. And, most importantly, he would probably have the support of the Americans.

For McMahon's finest hour was in January 1981 when, with the Bank's chief cashier David Somerset, he flew to Algeria to help arrange the complex financial deal to free the U.S. hostages in Tehran.

Express way

The revolving door has been whirling at American Express since it bought the big securities firm of Shearson Loeb Rhodes in 1981. And as it turns, Shearson men seem to be moving higher into the Amex hierarchy.

Yesterday came the news that Alva Way, the 53-year-old Amex

group president is off to take over a similar role at Travelers Corporation, the insurance-based financial services group. His successor at American Express is to be Sanford Weill, the hard-driving individual who built Shearson from a tiny base through a series of acquisitions in the 1960s and 1970s.

Weill's background is very different from that of James Robinson III, chairman and chief executive of American Express since 1977. Both men are in their late forties. But whereas Robinson, the son of an Atlanta banking family, was practically weaned into the corporate establishment, Weill comes from Brooklyn, and his image is that of a quick-tempered entrepreneur with an eye for a skillful deal.

Way departs only some four years after moving into the group from the top financial slot at General Electric. Another old GE hand, Sigurd Medboe, brought in shortly afterwards as chief financial officer, moved off to pastures new last month.

City days

With only hours to go before the publication of the Franks report a former Foreign Office man is in the news—Sir Michael Falliser, who was permanent under-secretary and head of the diplomatic service until retiring six days before the Argentines invaded the Falklands and who was a special adviser to the Prime Minister during the campaign.

Falliser's news has little to do with the battlements, however. He is taking the John Not route to City stardom. Today he starts work as a member of the board of Samuel Montagu.

Falliser, whose career included a stint as Ambassador to the EEC, joined the Foreign Office in 1947 after serving in the Goldstream Guards.

In his retirement he has made a bedline for business, joining the boards of United Biscuits,

Eagle Star Holdings and BAT Industries. Samuel Montagu's chairman Staffan Gadd says Falliser will spend about two days each week with the merchant bank, that is quite an impressive work schedule for a non-executive director.

But his task will be an absorbing one. He is to help Montagu with its country advisory service for such clients as Zambia, Jamaica and the Dominican Republic.

Given the dimensions of national debts these days a top diplomat at a merchant bank should have his hands full.

Art work

The Royal Academy has, for the first time, copied the example of the Met in New York and the Prado in Madrid by promoting its Murillo exhibition with a huge, eye-catching hoarding at the entrance.

A light-hearted pastiche of the 17th-century Spanish artist's celebrated work, "The Good Shepherd," the 24 ft by 20 ft canvas was painted in a week by Royal Academician Frederick Gore with the help of two students.

If anyone has a wall big enough to hang it, I am told the Academy will be open to offers after the exhibition closes on March 27. It needs to raise £130,000 to pay for the show and sponsor BAT is only prepared to pick up £77,000 of any loss.

Recalled

The motor industry is bringing out new car models at such a pace that it seems to be running into problems finding names for them all.

Austin Rover, as you know, is calling its new medium-sized car the Maestro—a name previously rejected by a vote of employees in favour of Metro. Over at Ford some executives have become dazed trying to fol-

low the name changes. The sequence goes like this. The company used the code-name Orion for a project to "face lift" the Fiesta, the results of which will be shown soon. But the Fiesta name will be retained.

The name Orion, however, will be transferred to a new car, based on the Escort but with a boot. The internal code-name for this so far has been Apollo.

Greek gods are obviously in at the moment. The replacement for the old Transit van will be named Triton.

Late breakfast

As the BBC stole a march over the independent television companies yesterday by bringing the first breakfast television to Britain I liked the comment of a commuter on his usual train into London for the day's slog: "I've decided not to watch breakfast TV. But I'm recording it to watch it tonight."

Meanwhile, the independent breakfast programme company TVAM is pitching for advertisers for its forthcoming show.

The enthusiasm of chairman Peter Jay is infectious and occasionally embarrassing. To draw attention to a test transmission he invited a number of potential advertisers to meet the new programme on air at 8 am one day "for an early breakfast."

Some 60 hungry businessmen turned up at the Little Venice studios expecting to partake of a hearty British breakfast while being entertained with a sneak preview.

Jay had, of course, intended them to view at the privacy of their own breakfast tables. The station kitchen was equal to the occasion, however. The unexpected visitors were treated to a full breakfast, champagne, and a chat from Jay.

Observer

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F17

Letters to the Editor

The heart of the problem in the assurance commissions war

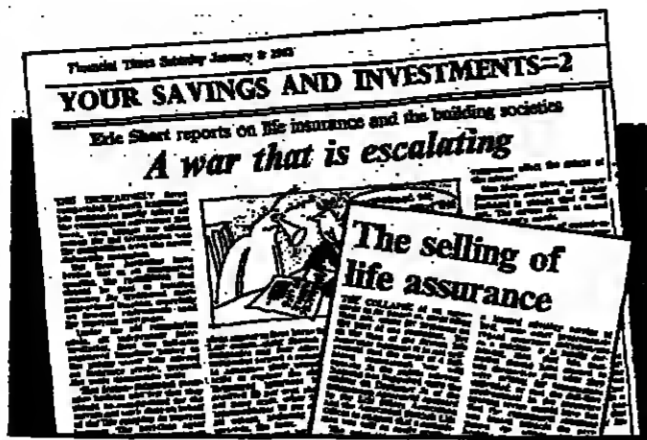
From the Chairman, Wider Share Ownership Council

Sir,—Both your editorial of January 11 and the mounting volume of correspondence on the subject (not confined to the Financial Times) testify to the seriousness of the issues which the life assurance industry has got itself.

Most of the critics, however, do not seem to be able to see the wood for the trees. They are concentrating on topical incidents, whereas the heart of the problem is that the whole system of payment to intermediaries was misconceived from the start; the house is built on sand. The insurance broker or other agent is rightly regarded as—and indeed claims to be—the agent of the policyholder, but instead of being paid directly and openly by the policyholder, as he should be, he is remunerated by a commission the existence and extent of which is concealed in the premium. The flexibility of payments to which this inevitably gives rise cannot but distort the impartiality of the advice and service which the customer is entitled to receive.

The whole nonsense is nowhere better exemplified than in the contention that a new or growing company should be permitted to offer higher commissions (ie bribes) to those who are supposed to be the agents of the insuring public. Insurance brokers should not be exposed to temptations which they can only resist at the cost of restricting revenue. But they are supposed to be the agents of the insuring public. Insurance brokers should not be exposed to temptations which they can only resist at the cost of restricting revenue. But they are supposed to be the agents of the insuring public.

The problem has, of course, been highlighted by the gradual realisation that, ever since the development of the endowment policy after World War 1, a growing proportion of life assurance contracts are essentially investments. This has sharpened the contrast with the securities industry, where the practice has been very



different. As every shareholder knows, he pays his stockbroker a commission which is not merely standardised but fully disclosed. The Stock Exchange is a shining example of how these things should be ordered. The Life Offices Associations, unable to enforce disclosure, strove manfully for years to enforce standardisation. Sadly but inevitably—and undermined by some of their own members—they have failed.

Edgar Palamoutian, Wider Share Ownership Council, London House, 94 St Paul's Churchyard EC4A

From Mr B. Lancaster

Sir,—Further to the article by Eric Shore and the subsequent letter from Mr D. E. Pope (January 6), I would like to ask the life assurance industry, both companies and registered insurance brokers, some pertinent questions.

"Why should anyone other than a full time professionally qualified insurance intermediary receive commission?" If both the insurance companies and the registered brokers wish to improve the image of their industry to the consumer surely this should be a first step. My feeling is that the answer from the insurance com-

panies will be volume of business rather than quality or profitability. "Why should life commissions be front-loaded?" Surely it is in time that the consumer was protected against the massive deduction from his investment should he, due to no fault of his own, have to realise that investment within the early years of effecting a policy. By paying life commissions on a level annual basis it would overcome that inequity and would attract people into the industry who are not only concerned with a quick return. All would see the value of continuing to provide a service for existing policyholders.

If we have to accept the existence of unqualified intermediaries and a differential commission scale, why should this differential not be used to improve the terms of the policy purchased from a fully qualified professional registered insurance broker? It would appear from recent Press comments that the members of British Insurance Brokers Association are not as concerned with increased commission as with differential remuneration. The life offices appear to accept the fact that there is a difference between a

broker who obtains business on their behalf, thereby saving costs, and those brokers and other intermediaries who expect insurance company payments to do the selling for them.

Surely then, if the fully professional registered broker was able to offer his clients impartial professional advice at no cost and a better policy than can be purchased elsewhere, the public would be foolish in the extreme to buy their insurance anywhere else.

Bryan J. Lancaster, 21 Whitehorse Moorland and Partners, Melburn House, New Road, Solihull, West Midlands

From the Chairman, Insurance Brokers Registration Council

Sir,—I have been following with interest the comment appearing in your columns in the matter of commission payable to intermediaries in connection with life assurance contracts. I would like to correct the impression which has been given with regard to disclosure of commission.

In using the services of an insurance broker (or assurance broker) "an individual who is, or is contemplating becoming, the holder of a United Kingdom policy" has a statutory right to ask and be told the amount of commission payable by the insurance company "under any relevant policy of insurance." This facility is by reason of the statutory code of conduct drawn up under the Insurance Brokers (Registration) Act 1977.

I would add that all insurance brokers, including Lloyd's insurance brokers, are bound by the statutory code and are also answerable by way of the disciplinary proceedings laid down under the Act. Francis Perkins, Insurance Brokers Registration Council, 15, St Helen's Place, EC3.

Setting targets and pay for top people in the public sector

From the Chairman, Spencer Stuart and Associates

Sir,—It is most encouraging to learn that a working party has put forward a plan for the salaries of chief executives of members of nationalised industries to be brought into line with those of the private sector. The plan also advocates performance-related bonuses, but the proposals it makes in this field do not go far enough. Several elements form the pre-conditions for achieving successful results through perform-

ance-related bonuses for top management.

There must be genuine belief in the value of, and commitment to, such incentives from the top (in this case, the Government).

The rules, and also the objectives and the time frame for their achievement, must be clearly understood. There must be no question of changing the targets or paying bonuses not fully justified under the rules. Boldness in implementation, with potential bonuses well

above 20 per cent (and frequently around 50 per cent) of base salary, is essential.

Unfortunately, the timid 10 to 15 per cent now being discussed is unlikely to have much effect and is itself perhaps an indication of official scepticism. This is a field in which half-or-quarter-measures achieve and prove little or nothing. Many private sector companies in this country are committed to the principle of direct financial incentives for top management and operate a

suitable bonus system with great success. They have almost always managed to overcome the problem of measuring achievement against defined objectives, even at the most difficult levels. Nationalised industries could do the same provided they can be told where the goal-posts are for the current period and can be assured that no one will move them until that period is completed. C. D. Power, Brook House, 113 Park Lane, W1

The British character and attitudes towards making money

From the Vice President, Simmons and Co International

Sir,—Ian Davidson ("Making money is not quite cricket," December 30) rightly questions the conventional wisdom concerning the "class system" and its responsibility for the lack of economic dynamism in Britain. Living and working in one of the world's more dynamic economies for the past five years I have come to similar conclusions from empirical observation. In the first place, a "class system" exists even in an economically dynamic society. As an astute leader of the Houston business community once told me, in Britain the class system is more apparent than real. In the U.S. it is more real than apparent.

Not only is the "British Establishment" in the very broadest sense of that term not interested in making money, a widespread feeling has been engendered that if one does it must automatically be at the expense of someone else, especially if it is made in a service-related activity. Furthermore, there is a pervasive resistance throughout society to considering even in principle, let alone dispassionately examining the relevant empirical evidence for or against, alternative methods of organising economic activity.

Yet I am not sure the British have never really been interested in making money. I have no doubt at all that the Northern Industrial entrepreneur in the post-Corn Laws era of the 1850s and 1860s would feel very much in line with the spirit of Houston once he had fathomed out the freeway system and learned how to use the phone.

Anthony W. Henfrey, Simmons and Co. International, 1800 South Tower, Pennzoil Place, Houston, Texas 77002

From Mr K. Thomas

Sir,—We all enjoy talking about the matters raised in

Ian Davidson's article (December 30: "Making money is not quite cricket") and in the ensuing correspondence (January 11). It is a socially acceptable form of talking about oneself. May I join in the fun?

Life is pleasant with a competence than without. I lack personal experience, but I am told this and believe it. What one regards as a competence depends on one's expectations, the time-scale of one's personal decision-taking, and one's planning horizon.

This is relevant to Mr Jefferson's implied statement that the British worker is indolent and/or unco-operative. During University vacations I several times worked as an unskilled labourer in a factory making uniform metal objects. I soon became aware that foremen and managers had their task made much more difficult than it need have been by absenteeism. Workers on an hourly rate of pay must make up their time, both in and out of working hours, calculating how much money they had earned that week. When they had earned enough for their week's needs, they ceased to turn up. The fact of absenteeism is undeniable. To the managers, it appeared as quite irresponsible. The workers, however, were undertaking fairly sophisticated calculations of the trade-off between extra marginal income and additional leisure. Their work was not particularly unpleasant but it was extremely boring. Another student working with me in the temporary unskilled gang commented that the point was not that our work was uninteresting, but that there was not one interesting job in the place; the managing director's job would have been an instructive challenge for six months, after which that also would have become boring.

Another student working with me in the temporary unskilled gang commented that the point was not that our work was uninteresting, but that there was not one interesting job in the place; the managing director's job would have been an instructive challenge for six months, after which that also would have become boring.

From Mr P. Wood

Sir,—None of the many correspondents who have written to you on the British character and attitudes to making money appears concerned about the effect of what Ian Davidson calls "rural nostalgia" on agriculture and the rural economy: on the people born and bred in the

countryside who have to make a living and a profit there.

Every year fresh waves of more or less older people who have actually made money elsewhere arrive in the countryside and immediately start to take it over, the pattern being more marked in the south than in the north where local resistance and the existence of larger numbers of owner-occupiers among the farming community tends to act as a brake.

Rural people are forced onto the defensive over the way their own area is run. Farmers are forced onto the defensive by the sometimes fierce and newly-discovered enthusiasm for conservation on the part of people who have arguably "spoilt" the countryside with their industrial operations elsewhere and whose ruthlessly successful application of commercial criteria to their operations has enabled them to become part of a new, generally feudal overlordship.

Rural people, who are often not especially articulate, are actively discouraged from home building or any entrepreneurial activity that might help them improve their income or simply their quality of life. The result is that the countryside is becoming increasingly suburbanised in the interests of "rural nostalgia" by people who have no genuine stake in it.

The basic attitude has never been more delightfully encapsulated than in my own native health care. A few years ago the National Park special planning board, rejecting an application to convert a ruined barn into a farm dwelling, said such a move would obviously be "injurious to the visual amenities" and would inevitably result in "signs of life". Peter Wood, Newbold Farm, Duntisbourne Abbas, Cirencester.

UK graduates in textile design who wish to work abroad

From the Chairman, The Quarr Company

Sir,—The wish of many graduates in this country in textile design to work with plants abroad is due to far more complex factors such as the competition on price, in manufacturing, the desire to produce more variation in fashion in different countries, the complex retail structure which allows for more assortments of styles abroad than in this country in addition to the reasons given in Anthony Moreton's article of January 10.

To a large extent, design in this country has not been as profitable as it has elsewhere. There are very real new develop-

ments taking place in Great Britain, mainly among distributors and chain stores who are trying to encourage young technologists and designers to work in their organisations to guide suppliers to be more creative and still keep within the parameters of price which enable them to develop mass production.

The development of small craft industries seems to be growing here as elsewhere and hopefully many young designers will be able to be more fulfilled than previously. The Textile Institute has also made very real efforts to try and reappraise where technologists can develop

and encourage industry to take more designers.

The difficulty has always existed between a master craftsman designer and the artist. The technical designer has frequently not the flair of creative ideas and the artist/designer has not the training and discipline of the technical discipline in order to be successful. Often the new young designer in a college of design produces more creative ideas than at the end of a course when he or she has been disciplined to mastering techniques/technologies. The Italians however, seem to have small units producing beautiful new yarns, very

accurate screen printing with gifted colourists, all in proximity to each other, the one stimulating the other. The need to design for the needs of consumers in small towns is something different from their neighbours puts pressure on design creativity at a level which is unthinkable today in this country of chain stores, virtually dominating every major shopping centre in this country, and consumers' limited desire for high quality fashion, although fortunately this seems to be altering. C. N. Nathan, The Quarr Company, 291, Oxford Street, W1

Reagan under pressure

The vultures are gathering

By Reginald Dale in Washington



Springe

"The stench of failure hangs over Ronald Reagan's White House," the New York Times.

"The spreading panic over the Reagan Budget," headline in the Wall Street Journal.

"What we are witnessing this January is not the midpoint in the Reagan Presidency, but its phase-out," David Broder in the Washington Post.

THE VULTURES are gathering over the White House. At mid-term, President Ronald Reagan has suddenly run into the severest barrage of public criticism that he has encountered in two years of office. His adversaries have gone so far as to suggest that his Administration is tumbling helplessly out of control in the manner of the latest disarrayed Soviet space satellite, and, like Cosmos 1402, breaking apart as it came down to earth.

Mr Reagan has been hurt and angered by the accusations, usually summed up in the one word "disarray" which he regards as both inaccurate and unfair. Most of all, he is upset by suggestions that he is no longer in control of a White House manned by a coterie of feuding officials who pay scant regard to his views and are increasingly trying to take what ought to be his own decisions for him.

Mr Reagan has been counter-attacked on two fronts. He has resorted to the traditional, though usually ineffective, device of a crack-down on White House "leaks," and on Friday he held an impromptu televised news conference, which he began by saying, only half-jokingly, that the time had come to straighten out the "disarray approaching chaos" that had broken out in the White House Press corps.

But Mr Reagan is not going to dispel the wave of criticism by Capote-like orders to it to recede. As he enters his third, crucial year as President, he faces his greatest challenges both at home and abroad—and yet his leadership has appeared in waver. He has not, as he himself maintains, "changed philosophically," but circumstances have, and he has yet to prove that he can master them.

In the past few weeks:

● Two of his senior Cabinet members have resigned (Mr

● His approval rating in the opinion polls has plummeted, from 45 to 38 per cent, according to one measure, and other polls show both Senator John Glenn and former Vice-President Walter Mondale beating him handsomely if he runs again in 1984.

● He has sacked his arms control chief, Mr Eugene Rostow, causing alarm and confusion over his intentions towards negotiations with the Soviet Union.

● He has given an impression of indecision amounting almost to desperation over his Budget policy.

All this at a time when the Democrats, sensing a new mood of disaffection in the country following November's mid-term elections, are planning to seize the initiative in Congress, and the balance of power looks to be tilting back towards Capitol Hill and away from Mr Reagan's White House. His own Republicans are looking increasingly anxiously towards the 1984 election, and growing restive over his continuing failure to clarify whether or not he plans to seek a second term.

By far the most serious "disarray" has been over the Budget. The two resigning Cabinet officers have not gone as a matter of principle, but because they feel that they have done their time in Washington and want to make more money in the private sector. Opinion polls can change, and the shake-up of the arms control establishment, though disquieting to many, is a sideshow in terms of who is really running the country.

What is alarming about the sudden deluge of Budget leaks is not so much that they may be inaccurate or even contradictory. It is that the President's advisers have been driven to revealing their views in public because he apparently will not or cannot—through his subordinates' leak of access to the Oval Office—listen to them otherwise.

Mr Reagan's style of leadership, in the past as governor of California and now in the White House, has never been to get too involved in the minutiae. He prefers the role of a political chairman of the board of directors, presiding over what he likes to call "Cabinet-type government."

What has been worrying some of his advisers in the last few days is that this is precisely what has not been happening. Mr Reagan has appeared less interested in nuts-and-bolts suggestions for cutting the Budget deficit and reviving the economy than in finding face-saving measures that could be reconciled with his original tax-cutting and defence-spending goals.

The result has been a public display of presidential detachment and indecision. Only hours before his Budget was due to be sent to the printers, Mr Reagan was still telling reporters that many of the major decisions had not been made. The overwhelming impression was that the President simply did not know what to do.

Of course, it is easier to pick on a President's decision-making style when things are going wrong. The continuing failure of economic recovery to materialise has not only thrown into his overall economic strategy and placed havoc with his Budget. Record post-war unemployment and the social hardships that are still gripping the nation have increased the

perception of the President as a man cut off from the real world, locked in the White House or isolated at his California mountain-top ranch, beyond the reach of everyday people and surrounded by only a few loyal officials and trusted friends.

Mr Reagan's senior White House aides are aware of the damage that has been done by the differences among his advisers that have surfaced in the Press—even if they have sometimes themselves been responsible for it. But they would claim that the differences are not necessarily more acute than in the past simply because they have been made public.

Privately, however, Administration officials acknowledge the Mr of the moment, his subordinates' leak of access to the Oval Office—listen to them otherwise. Mr Reagan's style of leadership, in the past as governor of California and now in the White House, has never been to get too involved in the minutiae. He prefers the role of a political chairman of the board of directors, presiding over what he likes to call "Cabinet-type government."

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▲ 120.213 Love Story, sculpture by Hans Jörg Linbach, Hombrechtikon, Switzerland

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SECTION II - COMPANIES AND MARKETS

FINANCIAL TIMES

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French banks adopt informal loan queue

BY DAVID MARSH IN PARIS

FRANCE'S nationalised banks are consulting more frequently with the Finance Ministry about the timing of their increasingly frequent fund-raising forays on the international capital markets.

But officials at the Treasury in Paris say that, contrary to fears in some banks, the Government is not bringing in any formal system to regulate bank borrowing abroad, along the lines of the "queue" operated for other public-sector borrowers.

French public-sector institutions, borrowing with a state guarantee, raised a total of \$10bn in publicised bond issues and credits on the international capital markets last year. To this was added \$2.9bn in bond issues and floating-rate notes by the banks (a six-fold increase from 1981, when the figure was only \$500m), and the \$4bn Euromarket credit arranged for the Republic last October.

Together with other borrowing such as the recently arranged credit line with Saudi Arabia, and diverse private and public-sector operations, total French borrowing abroad last year may have been as much as \$25bn, according to estimates circulating widely in Paris.

"The French banks which regularly borrow on the Euromarket have started 1983 with a bang. Banque Indosuez, Banque Nation-

ale de Paris, Cr dit Agricole and Cr dit Lyonnais have launched issues in quick succession over the past month.

Officials say banks preparing bonds regularly contact the Treasury for guidance about other possible issues to avoid "collisions." But they say that the banks are under no obligation to keep the Treasury informed, nor do they have to abide by its suggestions about timing.

This suggests that the onus is being put on the banks themselves - which have as much interest as the Treasury in avoiding undue "bunching" of issues and a weakening of their credit rating - to work out a self-policing system.

Two forest groups see signs of upturn

BY RICHARD LAMBERT IN NEW YORK

TWO MAJOR forest product groups yesterday indicated that business conditions were beginning to improve after what they described as the most adverse period for their industry in modern history.

Mr George Weyerhaeuser, president and chief executive of Weyerhaeuser Company, said that the bottom of the cycle appeared to have been reached in November.

Markets for pulp, paper and some paper-based products appeared to have stabilised, although most were expected to remain relatively weak for at least several months.

The rapid strengthening of the yen against the dollar had restored significant competitive strength in serving Japanese markets, which normally accounted for about 15 per cent of the group's total sales.

Weyerhaeuser's sales for the year fell from \$4.5bn to \$4.2bn and its net income dropped to \$169m or \$1.12 a share, compared with \$228m or \$1.62 a share in 1981.

Reporting earnings for the fourth quarter were \$50m or 38 cents a share, compared with \$46m, or 30 cents a share a year earlier. The latest period included a net credit of 49 cents a share from non-operating items.

Boise Cascade's sales in 1982 dropped from \$3.1bn to \$2.9bn and its earnings slumped from \$120.1m or \$4.50 a share, to \$73.3m or 26 cents a share. The group recorded a small loss at the pre-tax level - which was offset by a tax credit.

Earnings of 28 cents a share in the final quarter were boosted by a tax benefit and a change in actuarial assumptions covering the group's pension provision, but the period also took in a foreign exchange loss.

The group's paper business was especially hard hit in the final quarter, with weak demand for pulp and paper and falling prices for several major products.

Mr John Fery, Boise's chairman and chief executive, said that business conditions were still severely depressed and would probably remain so through the first quarter of 1983.

But he added that a continued modest improvement in home construction should lift the group's building materials activities. He said that the paper business appeared to have hit bottom, and was likely to improve gradually as the economy strengthened.

BRITISH COMPANIES ADVISED TO 'HAVE A GO' Eurobonds attract Allied-Lyons

BY ALAN FRIEDMAN IN LONDON

"I THINK more British companies should make use of the Eurobond market. The thing to do is to take courage in your hands and have a go."

This advice comes from Mr John Clemes, chairman of the influential "Hundred Group" of British corporate finance directors and a man very satisfied indeed with his own recent forays into the Eurobond market.

For Mr Clemes is also finance director of Allied-Lyons, the brewery-to-foods group which started the New Year with a \$75m 8-year 11 1/4 per cent Eurobond, its first in the dollar sector and a rare appearance by a British company.

The purpose of the new Allied-Lyons Eurobond is to help refinance around \$40m of U.S. dollar debt incurred last year when the group acquired an ice-cream company from Coca-Cola and a coffee company in the U.S.

The group can also use dollars for other U.S. activities and the money is cheaper than it would cost to borrow in sterling.

The final attraction for Allied-Lyons was that as it pays the full rate of U.S. tax (and receives full tax relief on dollar bond interest payments), its coupon cost will be partly borne by U.S. Internal Revenue Service.

For a group which spends around \$90m a year on capital investments and has an outstanding debt of \$400m, a bond issue of \$75m may seem small beer. But Mr Clemes says that he and Mr Vernon Cull, group treasurer, had been planning the issue since 1980.

"We felt the coupon ought to be under 12 per cent, but it wasn't until the summer of 1982 that we thought there might be an opportunity. In November we saw a window opening," recalls Mr Cull.

The two Allied-Lyons executives chatted with County Bank, their adviser on the deal, every day. Just after Christmas ("when most people were on holiday") they decided that the fundamentals were right. At 9.30am the morning of January 4, the first working day of 1983, Allied-Lyons gave the signal for launch.

The deal has not been an outstanding success in the Eurodollar bond market. Allied-Lyons is not a household name on Zurich's Bahnhofstrasse in quite the way IBM or Campbell Soup might be. Nonetheless, the issue was led by County Bank and Samuel Montagu and after a sluggish start was placed with Eurodollar investors.

The paper was trading yesterday at a discount of 1 1/2 per cent from its issue price of par, indicating approval though not enthusiasm on the part of investors.

The Allied-Lyons bond is a "partly-paid" deal, with only 25 per cent of the purchase price payable now and the balance due next August. The partly-paid technique is now very popular in the dollar-sector.

Allied-Lyons was the first company to issue a public Eurosterling bond on a partly-paid basis; this occurred last October.

This was a 10-year 12 1/2 per cent \$30m bond led by Hill Samuel. The initial 25 per cent was payable on application and the balance is due in April.

Mr Clemes is pleased with the use of this fund-raising technique, but he is even more pleased that the \$30m sterling bond also made use of an interest rate swap.

Through an arrangement with Standard Chartered Bank, acting as intermediary, Allied-Lyons was able to trade its 12 1/2 per cent fixed-rate coupon with an anonymous counterparty which provided floating rate debt at the London interbank offered rate (Libor).

Messrs Clemes and Cull then were able to use the \$30m of proceeds to refinance floating rate debt at "a significant saving." The counterparty was not identified, but Allied-Lyons insists it was "a non-controversial, European, sound company."

Much of this may sound run-of-the-mill for veteran borrowers in the Eurobond market, but it is still considered daring by several British finance directors.



Mr Vernon Cull, group treasurer (left) and Mr John Clemes, finance director

Security Pacific records eighth successive year of profit growth

BY PAUL TAYLOR IN NEW YORK

SECURITY PACIFIC Corporation, the parent company of the tenth largest bank in the U.S., yesterday reported sharply higher fourth quarter and full year earnings.

Income before security transactions in the fourth quarter increased by 26 per cent to \$83.5m or \$2.28 a share from \$65.6m or \$1.80 a share in the 1981 period. This helped full year operating income post a 13 per cent increase from \$207.2m or \$7.06 a share to a record \$234.3m or \$7.83 a share.

Securities gains and losses were not significant in either the quarterly or full year results.

Mr Richard Flanagan, chairman, said the results represented the eighth successive year of strong profit growth for the bank and added "these record earnings were achieved in spite of significant uncertainties in the world economy, a situation which we expect to see continue throughout 1983."

Security Pacific, which recently acquired a 29.6 per cent stake in

Hoare Govett, the UK stockbroker, and has been moving aggressively into the discount brokerage business in the U.S., was helped in the fourth quarter and full year results by the sale of the headquarters building of its 69 per cent owned subsidiary, the Bank of Canton.

This sale resulted in a pre-tax gain of \$50.5m, offsetting "an acceleration of loan charge-offs, a significant build-up in credit reserves and other expense items." Mr Frank Cahouet, the company's vice chairman and chief financial officer, said the sale added about 4 per cent to earnings for the year.

Net interest income for the year increased by 16 per cent to \$1.26bn from \$909.6m.

A 20 per cent increase in fourth quarter net interest income to \$295.7m over the same period in 1981 came despite a substantial increase in non-performing loans.

These loans totalled about \$680m at the end of the year, compared with \$33m at the end of 1981 and \$553m at the end of the third quarter. Most of this increase in the fourth quarter resulted from placing certain international credits on a non-performing status, the bank said.

The bank's reserve for credit losses was also increased significantly. The provision was \$65.4m for the final quarter compared with \$14.9m in the same period in 1981 and \$37m for the third quarter.

For the year the provision totalled \$162.4m compared with \$72.1m in 1981. At the end of the year the reserve for total credit losses was \$252.6m or 1.13 per cent of total loans compared with \$111.3m or 0.97 per cent of total loans at the end of 1981.

Net credit losses in the fourth quarter of \$42.4m resulted in an annual total of \$96.1m compared with \$44.7m in the previous year. The \$53.4m increase included a \$35.2m increase in gross charge-offs and a \$18.2m decrease in recoveries.

Toppan Printing maintains sales Zurich bank profits rise

BY YOKO SHIBATA IN TOKYO

TOPPAN PRINTING, Japan's second largest printing company, maintained its profit and sales position in the first half of the fiscal year to October 30, 1982, although demand in the industry slowed down.

Although the trading account showed a poorer out-turn than in the same period last year, improvements in the company's financial balance, primarily to a net gain on interest charges, enabled it to maintain its overall earnings position and keep its dividend unchanged at ¥4.50 per share.

Toppan's unconsolidated operating profits for the half year reached ¥14.6bn (\$63.5m), up by 2.5 per cent over the same period in the previous year. Half-year net profits were 12 per cent higher to reach ¥7.2bn, on half-year sales of ¥237.4bn up 6.5 per cent over the previous year. Half-year net profits per share were ¥17.51, compared with ¥18.43 in the previous year.

Sales in the general printing sector, representing 62.9 per cent of the total, rose by 7.4 per cent. Sales of electronic parts, including micro-precision parts, printed circuit boards and lead frames were particularly strong. Publication sales advanced by 7.4 per cent to account for 19.2 per cent of the total.

For the current half year ending March, 1983, the company sees a double-digit growth in its electronics parts division and recovery in paper container sector.

Full-year operating profits are expected to reach ¥30bn, up by 4.2 per cent over the previous year, with net profits projected at ¥15bn, up by 5.1 per cent, on expected sales of ¥475bn, 6 per cent up on the previous year.

By Our Zurich Staff

BANK JULIUS Baer, Zurich, lifted net profits by 9 per cent last year to SwFr 16.4m (\$8.45m), and paid an unchanged 15 per cent dividend on increased share capital of SwFr 67.5m.

The bank is wholly owned by the Zurich-based company, Baer Holding, which plans to issue a convertible bond loan of up to SwFr 30m in March.

The balance-sheet total rose by SwFr 528m to SwFr 1.75bn last year.

Takeover for Data Terminal

BY OUR FINANCIAL STAFF

DATA TERMINAL Systems, the second largest maker of electronic cash registers and point of sales equipment in the U.S. after NCR, has agreed to a takeover by National Semiconductor, the U.S. electronics components and computer group.

The deal approved by both companies' boards has two parts. In the first National Semiconductor will pay \$8 a share cash for up to 4.3m Data Terminal common shares, or about two-thirds of the total. In the second stage holders of the remaining shares will receive \$7.25 a share. The deal values the company at about \$50m.

Offetti, the Italian office equipment company, has a stake of 12 per cent in Data Terminal. There was no immediate comment on the deal from Offetti which had bought into Data Terminal to strengthen its U.S. presence. It also sells the U.S. company's products in some European countries.

Data Terminal reported a loss of \$14.7m on sales of \$122m in 1981, reflecting the weak economy. Demand from its major customers, the food and retail industries, collapsed just when the company had embarked on a major expansion programme.

The company has cut costs but a substantial although lower loss for 1982 is forecast by Wall Street analysts.

Mr Warren Tyler, president of Data Terminal, said: "The technological and financial resources of National Semiconductor will give our customers, distributors and dealers the added confidence they need to commit themselves to our products."

U.S. Home moves back to profit as starts rise

BY OUR FINANCIAL STAFF

U.S. HOME Corporation, the largest private home builder in the U.S., returned to the black in the fourth quarter of last year, and has achieved a modest increase in profits for 1982.

The fourth quarter increase is a result of lower U.S. interest rates which have eased the burden on mortgage finance and boosted home starts.

In the final period, the group showed a profit of \$8.05m or 30 cents a share against the previous year's loss of \$8.9m or 60 cents on revenues up more than 16 per cent at \$226.2m against \$194.1m.

The profits also represent a significant improvement on the first three quarters of the year. While the third quarter was slightly ahead, the second quarter was sharply down, and the first quarter showed a deficit.

U.S. Home has been subsidising home buyers' financing costs in order to boost flagging sales earlier in the year, and despite this sales fell 19 per cent in the first nine months of 1982.

For the whole of 1982, U.S. Home net profits moved ahead nearly 21 per cent from \$10.02m or 89 cents a share to \$12.11m or 75 cents a share on sales down 12 per cent from \$982.2m to \$864.2m. The results include a gain of \$3.03m or 12 cents a share from the exchange of stock for debt, against a gain of \$3.23m or 22 cents a share in 1981.

The increase comes despite a 3 per cent decline in new orders for 1982 13,053 from 13,438 in 1981.

Norwegian group sees profit fall

By Fay Gjester in Oslo

A STEEP fall in 1981 profits to breakeven levels is reported by the Norwegian Borregaard group, whose interests span forest products, chemicals, minerals, foodstuffs and toiletries.

The board will, however, recommend paying an 8 per cent dividend from funds.

The 1981 dividend was 11 per cent, unchanged from the previous year. Group external sales at about Nkr 3.7bn (\$500m) were only slightly less than a year earlier when they stood at Nkr 3.8bn.

A preliminary report says that operations in 1982 are expected to show a result before year-end appropriations of "close to zero," compared with a profit of Nkr 151.2m in 1981. The steep decline reflects heavy losses in the second half of last year by the group's Sulphate cellulose plant at Sarpsborg, in East Norway.

Alcan closes smelter in West Germany

By Our Industrial Staff

ALCAN ALUMINIUMWERKE, a West German subsidiary of the Canadian aluminium group, is closing its primary smelter at Ludwigshafen, affecting 330 employees.

The company first announced its intention to close the smelter last September in response to a proposed substantial increase in electric power prices from the local utility, Pfalzwerke.

The closure was then postponed at the request of provincial and municipal officials while attempts were made to negotiate an acceptable power price.

This has not been possible, and so the smelter can no longer produce metal at costs that are competitive, even though it is modern and efficient, Alcan says.

Improved profit for Ciba-Geigy

BY JOHN WICKS IN ZURICH

CIBA-GEIGY, the Swiss chemical group, said yesterday its earnings improved again last year despite a rise of only 1 per cent in consolidated sales. No figure was given for the profits in consolidated sales.

In 1981, group profits jumped by 71 per cent to SwFr 521m (\$269m) after a 14 per cent sales increase.

The earnings growth is attributed by Ciba-Geigy Basel, the parent company, to the satisfactory performance of the biological divisions and above all to re-structuring and rationalisation over the past two years.

Total sales were up by SwFr 200m (\$103m) in 1982 to a record SwFr 13.6bn. The modest growth rate was partly the result of the strength of the Swiss franc, with sales rising by some 8 per cent, in local currencies.

Business suffered from the recession. Difficult market conditions were experienced by the dyestuffs and chemicals division, whose Swiss-franc sales dropped 2 per cent to SwFr 2.15bn, and the plastics and additives division, where sales fell off by 1 per cent to SwFr 1.58bn.

The Airwick division's sales fell by 4 per cent to SwFr 880m. The Ilford group saw a sales decline of 10 per cent to SwFr 420m and the electronic equipment division, a 1 per cent fall to SwFr 460m.

Despite what the company calls restrictive government measures - such as pressure on prices and intervention in prescribing practices - the pharmaceutical division lifted sales in 1982 by 3 per cent to SwFr 4.08bn.

A 2 per cent increase, to SwFr 3.45bn, was registered by the agricultural division.

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OCTOBER 1982

THE REPUBLIC OF GABON

COUNTER-VALUE OF
US \$460,000,000

FINANCING OF THE CONSTRUCTION OF THE SECOND SECTION OF THE
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Medium Term Loan

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December, 1982

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U.S. \$200,000,000

GMAC Overseas Finance Corporation N.V.

(Incorporated in the Netherlands Antilles)

10 1/8% NOTES DUE FEBRUARY 1, 1990

Payment of principal and interest unconditionally guaranteed by

GENERAL MOTORS ACCEPTANCE CORPORATION

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The following have agreed to subscribe for the Notes:

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BANQUE GENERALE DU LUXEMBOURG S.A.	BANQUE NATIONALE DE PARIS
COMMERZBANK AKTIENGESELLSCHAFT	CONTINENTAL ILLINOIS CAPITAL MARKETS GROUP
CREDIT SUISSE FIRST BOSTON Limited	DEUTSCHE BANK AKTIENGESELLSCHAFT
MANUFACTURERS HANOVER Limited	MERRILL LYNCH INTERNATIONAL & CO.
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The Notes, in the denomination of U.S. \$5,000 issued at 99 per cent., have been admitted to the Official List by the Council of The Stock Exchange, subject only to the issue of the temporary Note. Interest is payable annually in arrears on February 1, commencing on February 1, 1984.

Particulars relating to the Notes are available from Exel Statistical Services Limited and may be obtained during normal business hours on any weekday (Saturdays excepted) up to and including February 1, 1983 from the brokers to the issue:

Cazenove & Co.,
12, Tokenhouse Yard,
London
EC2R 7AN.

January 18, 1983

U.S. \$25,000,000

B

Bergen Bank A/S

(Incorporated in the Kingdom of Norway with limited liability)

Floating Rate Capital Notes Due 1991

In accordance with the provisions of the Notes, notice is hereby given that for the three month interest period from 17th January, 1983 to 16th April, 1983 the Notes will carry an interest rate of 9 1/8% per annum and the Coupon Amount per U.S. \$1,000 will be U.S. \$23.07.

Credit Suisse First Boston Limited
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(The Notes)

(a) Credit Lyonnais as Fiscal Agent in respect of the Notes has received payment of U.S.\$5,000,000.
(b) The Bank has advised Credit Lyonnais that interest due and payable in respect of the Notes will be paid to Credit Lyonnais in the shortest time.
(c) A further notice will be published.

CREDIT LYONNAIS

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Bankers Trust Company,
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Fiscal Agent

The Royal Bank of Scotland plc

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due 1986 to 1994

For the three month period January 14th 1983

to April 14th 1983, the

Notes will bear an

interest rate of 9% per

annum. Interest payable

on April 14th 1983.

Bankers Trust Company,
London

Note: Copies of the Annual

Report and Accounts of The

Royal Bank of Scotland plc

and The Royal Bank of

Scotland Group plc can be

obtained from the Bank's

office at 34 Lombard Street,
London EC3V 9BA.

Companies
and Markets

INTL. COMPANIES & FINANCE

Our Johannesburg Correspondent reports on the collapse of a high-flying take-over specialist

Bubble bursts for Magnum

MAGNUM, once one of South Africa's high-flying take-over groups, has, since its collapse, become the centre of a spreading financial scandal.

At present a judicial inquiry into what is being called the Magnum affair is sitting in camera, several large corporations are embroiled through their lending to the company, and the role of one of the merchant banks involved in its take-over operations is being publicly questioned.

The affair has its origins in late 1981 when Mr Martin Summerley, chairman and key force behind the Magnum group, attempted to raise R5m (\$4.6m) through a public issue of shares by his private carrier Magnum Airlines. The offer was poorly received by investors and withdrawn.

In early 1982 Mr Summerley's master company, Magnum Financial Holdings, sold the airline. At about the same time R4.4m was paid for a 50 per cent share of I. L. Back, a quoted shell company.

Magnum bought I. L. Back at a price equivalent to 5.18 cents per share, a premium of 2 cents per share over the company's net worth. However, few minority shareholders accepted the offer as the shares were then quoted at a much higher level.

Through its I. L. Back purchase Magnum acquired control of R6.3m in liquid assets in exchange for a R4.4m investment. It was also able to use the company as a vehicle to get Magnum Finance and Investment, a subsidiary of the holding company, listed on the stock exchange.

With the cash from I. L. Back plus some regular bank loans Magnum launched a series of

purchases. It also, allegedly, began to receive funds from the South African Bank of Athens (which is controlled by the National Bank of Greece) through the assistance of one of the bank's senior executives who now faces charges of fraudulent handling of its funds.

In quick succession Magnum bought control of a burglar alarm company, the South African assurance business of National Employers General Insurance, a boat-building business, and motor dealer,

(UAL), through advertisements in the national press, that they would receive a share offer comparable with that made to the majority.

South African company law limits the extent to which an acquired company's own funds can be used to pay for its purchase. It is now being alleged that Magnum were attempting to circumvent these provisions in its Javor operation.

A little later Magnum moved to try to acquire the Group Five Construction company. Magnum bought Group Five shares

and the bank tried to stop payment of its own cheque to Hobbs the issue became public and the creditors began to move in.

The list of creditors is long and according to the liquidators the losses of the Magnum group could total anywhere between R30m and R60m. Major known creditors include transport company Puteo, which is owed R3m and the South African Broadcasting Corporation owed R1m. These and others believe that they have claims against the South African Bank of Athens.

UAL, which is the merchant banking arm of the Nedbank group, faces claims estimated at up to R12m. The bank lent R6.5m to Magnum against a pledge of shares in both Group Five and Northern Free State Motors. There is now a dispute as to whether or not this pledge, made less than six months prior to the group going into liquidation, is covered by the "undue preference" provisions of the companies act and therefore invalid.

Finally several minority shareholders in the now-suspended and bankrupt Javor are threatening to seek redress from UAL over the failure to make the once-promised bid.

At present the whole Magnum affair is under investigation by a committee set up under South Africa's Companies Act. The proceedings are in camera. However, Mr Summerley and his deputy Mr Derek Pennington have, at the request of the police, surrendered their passports to their attorneys. All of the Magnum group companies are being liquidated with the exception of the life assurance operations which were taken as security for a loan by Rand Merchant Bank.

Once the Magnum group was one of the rising stars of the South African corporate world; now the group has been forced into liquidation. The high life-styles of its directors and plans to sponsor an ocean-going yacht in international events have all had to be abandoned amid a welter of claims and charges of fraudulent dealings

Northern Free State Motors. Almost as quickly it used its purchases as securities for further loans.

However, Magnum was beginning to run into problems; it was paying over the odds for its acquisitions at a time when its stock market and grey market operations were not going well.

A fresh source of cash was found last July when Magnum purchased control of Javor, a shell company with liquid assets. Altogether it paid R2.85m for its 50 per cent shareholding and therefore its control over funds of R5.3m.

The cash from Javor was channelled into Magnum's other activities in spite of the fact that minority shareholders had been assured by both the company and its merchant bankers, Union Acceptances Limited

aggressively in November and December, acquiring a 30 per cent holding at a high price of 350 cents per share.

The takeover bid failed, however, when another purchaser obtained control over a blocking 20 per cent. This ended any plans Magnum may have had to make a rights issue through Group Five and by this means to raise more cash.

By this stage Magnum was critically short of funds. In one final flag one company in the group issued a cheque for R4m to South African Bank of Athens. The bank issued its own cheque to stockbrokers A. Hobbs.

Hobbs, whose managing director is on the Magnum board, in turn paid R4.5m to another Magnum company. When the first Magnum cheque bounced

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Nippon Telegraph & Telephone Public Corporation

(Incorporated in Japan)

U.S. \$50,000,000

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The Notes, issued at 100 per cent. plus accrued interest, in denominations of U.S.\$5,000 have been admitted to the Official List by the Council of The Stock Exchange subject only to the issue of a temporary global Note. Interest on the Notes is payable annually in arrears on January 31, commencing January 31, 1984. Particulars of the Notes and the issuer are available in the Exel Statistical Service and may be obtained during usual business hours up to and including January 31, 1983 from:

Cazenove & Co.,
12 Tokenhouse Yard
London EC2R 7AN

Morgan Guaranty Ltd
30 Throgmorton Street
London EC2N 2NT

January 17, 1983

CADO Systems Corporation

has been acquired by

Continental Telecom Inc.

The undersigned initiated this transaction, assisted in the negotiations leading to its conclusion, and acted as financial advisor to CADO Systems Corporation.

L. F. ROTHSCHILD, UNTERBERG, TOWBIN

January 6, 1983

155 من الامم

INTL. COMPANIES and FINANCE

EDF issue goes ahead

BY ALAN FRIEDMAN IN LONDON

ELECTRICITE DE FRANCE, the French utility, yesterday followed last week's flood of \$300m in new dollar bonds with its own \$300m floating rate Eurobond plus warrants, to purchase fixed-interest bonds.

Although the Eurobond market's new issue sector was heavily burdened by last week's paper, and was described by a leading banker last night as "a battlefield with plenty of wounded," Morgan Guaranty decided to go ahead with the \$300m EDF issue anyway.

The new issue matures in 12 years, is priced with interest payable at 4 per cent over the six-month London interbank rate and carries a 5 1/2 per cent minimum coupon.

Investors may redeem the floating rate notes after the seventh and ninth years at par. There are also 150,000 warrants, which enable

noteholders to purchase 10% per cent 1993 bonds during the next 12 months.

Each floating rate note, denominated in \$10,000 sections, carries five warrants. The warrants may be exercised at any time during the next year, but if they are used within six months, investors obtain a discount and may purchase the bonds at 99; otherwise the price will be par.

By last night the warrants were being quoted in the pre-market at between \$17 and \$18 each. The market's reaction to the EDF deal was said to be reasonable, though not enthusiastic.

This is not surprising given the weight of \$300m of new dollar issues from last week. The Eurodollar bond market is catching its breath now in order to reassess matters.

Prices were marked 1/4 to 1/2 point lower yesterday.

In the Euro-Canadian dollar bond market, a new C\$50m issue for SEK, the Swedish export credit organisation, was priced last night by Wood Gundy with a 12 1/2 per cent coupon, below the earlier indicated 12 3/4 per cent level. This deal has sold out quickly, one of the few to do so.

In West Germany, prices were down 1/4 point last night. A DM 100m issue for Spanish Telephones is expected today through Dresdner Bank - the coupon should be higher than 8 per cent.

In Switzerland, Credit Suisse announced a SwFr 150m 10-year 4 1/2 per cent issue for itself. The proceeds will be partly used to repay a SwFr 60m 5 1/2 per cent 1988 issue which the bank is calling back from investors on February 15.

Dutch set up joint bank with Packer

By Lechlan Drummond in Sydney

ALOEEMENE BANK Nederland, the largest Dutch bank, has been given the go-ahead by the Australian authorities to set up a jointly owned merchant bank with Mr Kerry Packer's Consolidated Press Holdings.

ABN already has an 18 per cent stake in the Australian European Finance Corporation consortium bank and a representative office. It is to pay an undisclosed amount for 50 per cent of the Packer group's small leasing subsidiary, Alpine Finance, and will jointly lift its issued capital from A\$1.2m to at least A\$10m (\$10.1m).

The new operation, to be named ABN Australian, has been under consideration by the Australian foreign investment authorities for some time. The new bank intends to operate in the domestic money market operations, as well as in offshore and local corporate lending and foreign exchange hedging.

Profits improve at DG Bank

By Stewart Fleming in Frankfurt

FALLING INTEREST rates have contributed to a significant improvement in the profitability of the DG Bank, the central banking institution of the West German co-operative banking movement.

The bank has announced that it is planning to increase its equity capital by DM 200m (\$85.1m) and that it will resume dividend payments to its owners, the co-operative banks, at a rate of 5 per cent. In addition it will add DM 70m to its open reserves compared with DM 40m last year.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published on the second Monday of each month. The following are closing prices for January 17.

U.S. DOLLAR	Issued	Bid	Offer	Change	Yield
STRANITRA					
Amco 10 1/2 87	150	110 1/4	111 1/4	+1/4	10.88
Amco 10 1/2 88	75	109 1/4	110 1/4	+1/4	11.00
Amco 10 1/2 89	200	108 1/4	109 1/4	+1/4	11.12
Amco 10 1/2 90	150	107 1/4	108 1/4	+1/4	11.24
Amco 10 1/2 91	150	106 1/4	107 1/4	+1/4	11.36
Amco 10 1/2 92	150	105 1/4	106 1/4	+1/4	11.48
Amco 10 1/2 93	150	104 1/4	105 1/4	+1/4	11.60
Amco 10 1/2 94	150	103 1/4	104 1/4	+1/4	11.72
Amco 10 1/2 95	150	102 1/4	103 1/4	+1/4	11.84
Amco 10 1/2 96	150	101 1/4	102 1/4	+1/4	11.96
Amco 10 1/2 97	150	100 1/4	101 1/4	+1/4	12.08
Amco 10 1/2 98	150	99 1/4	100 1/4	+1/4	12.20
Amco 10 1/2 99	150	98 1/4	99 1/4	+1/4	12.32
Amco 10 1/2 00	150	97 1/4	98 1/4	+1/4	12.44
Amco 10 1/2 01	150	96 1/4	97 1/4	+1/4	12.56
Amco 10 1/2 02	150	95 1/4	96 1/4	+1/4	12.68
Amco 10 1/2 03	150	94 1/4	95 1/4	+1/4	12.80
Amco 10 1/2 04	150	93 1/4	94 1/4	+1/4	12.92
Amco 10 1/2 05	150	92 1/4	93 1/4	+1/4	13.04
Amco 10 1/2 06	150	91 1/4	92 1/4	+1/4	13.16
Amco 10 1/2 07	150	90 1/4	91 1/4	+1/4	13.28
Amco 10 1/2 08	150	89 1/4	90 1/4	+1/4	13.40
Amco 10 1/2 09	150	88 1/4	89 1/4	+1/4	13.52
Amco 10 1/2 10	150	87 1/4	88 1/4	+1/4	13.64
Amco 10 1/2 11	150	86 1/4	87 1/4	+1/4	13.76
Amco 10 1/2 12	150	85 1/4	86 1/4	+1/4	13.88
Amco 10 1/2 13	150	84 1/4	85 1/4	+1/4	14.00
Amco 10 1/2 14	150	83 1/4	84 1/4	+1/4	14.12
Amco 10 1/2 15	150	82 1/4	83 1/4	+1/4	14.24
Amco 10 1/2 16	150	81 1/4	82 1/4	+1/4	14.36
Amco 10 1/2 17	150	80 1/4	81 1/4	+1/4	14.48
Amco 10 1/2 18	150	79 1/4	80 1/4	+1/4	14.60
Amco 10 1/2 19	150	78 1/4	79 1/4	+1/4	14.72
Amco 10 1/2 20	150	77 1/4	78 1/4	+1/4	14.84
Amco 10 1/2 21	150	76 1/4	77 1/4	+1/4	14.96
Amco 10 1/2 22	150	75 1/4	76 1/4	+1/4	15.08
Amco 10 1/2 23	150	74 1/4	75 1/4	+1/4	15.20
Amco 10 1/2 24	150	73 1/4	74 1/4	+1/4	15.32
Amco 10 1/2 25	150	72 1/4	73 1/4	+1/4	15.44
Amco 10 1/2 26	150	71 1/4	72 1/4	+1/4	15.56
Amco 10 1/2 27	150	70 1/4	71 1/4	+1/4	15.68
Amco 10 1/2 28	150	69 1/4	70 1/4	+1/4	15.80
Amco 10 1/2 29	150	68 1/4	69 1/4	+1/4	15.92
Amco 10 1/2 30	150	67 1/4	68 1/4	+1/4	16.04
Amco 10 1/2 31	150	66 1/4	67 1/4	+1/4	16.16
Amco 10 1/2 32	150	65 1/4	66 1/4	+1/4	16.28
Amco 10 1/2 33	150	64 1/4	65 1/4	+1/4	16.40
Amco 10 1/2 34	150	63 1/4	64 1/4	+1/4	16.52
Amco 10 1/2 35	150	62 1/4	63 1/4	+1/4	16.64
Amco 10 1/2 36	150	61 1/4	62 1/4	+1/4	16.76
Amco 10 1/2 37	150	60 1/4	61 1/4	+1/4	16.88
Amco 10 1/2 38	150	59 1/4	60 1/4	+1/4	17.00
Amco 10 1/2 39	150	58 1/4	59 1/4	+1/4	17.12
Amco 10 1/2 40	150	57 1/4	58 1/4	+1/4	17.24
Amco 10 1/2 41	150	56 1/4	57 1/4	+1/4	17.36
Amco 10 1/2 42	150	55 1/4	56 1/4	+1/4	17.48
Amco 10 1/2 43	150	54 1/4	55 1/4	+1/4	17.60
Amco 10 1/2 44	150	53 1/4	54 1/4	+1/4	17.72
Amco 10 1/2 45	150	52 1/4	53 1/4	+1/4	17.84
Amco 10 1/2 46	150	51 1/4	52 1/4	+1/4	17.96
Amco 10 1/2 47	150	50 1/4	51 1/4	+1/4	18.08
Amco 10 1/2 48	150	49 1/4	50 1/4	+1/4	18.20
Amco 10 1/2 49	150	48 1/4	49 1/4	+1/4	18.32
Amco 10 1/2 50	150	47 1/4	48 1/4	+1/4	18.44
Amco 10 1/2 51	150	46 1/4	47 1/4	+1/4	18.56
Amco 10 1/2 52	150	45 1/4	46 1/4	+1/4	18.68
Amco 10 1/2 53	150	44 1/4	45 1/4	+1/4	18.80
Amco 10 1/2 54	150	43 1/4	44 1/4	+1/4	18.92
Amco 10 1/2 55	150	42 1/4	43 1/4	+1/4	19.04
Amco 10 1/2 56	150	41 1/4	42 1/4	+1/4	19.16
Amco 10 1/2 57	150	40 1/4	41 1/4	+1/4	19.28
Amco 10 1/2 58	150	39 1/4	40 1/4	+1/4	19.40
Amco 10 1/2 59	150	38 1/4	39 1/4	+1/4	19.52
Amco 10 1/2 60	150	37 1/4	38 1/4	+1/4	19.64
Amco 10 1/2 61	150	36 1/4	37 1/4	+1/4	19.76
Amco 10 1/2 62	150	35 1/4	36 1/4	+1/4	19.88
Amco 10 1/2 63	150	34 1/4	35 1/4	+1/4	20.00
Amco 10 1/2 64	150	33 1/4	34 1/4	+1/4	20.12
Amco 10 1/2 65	150	32 1/4	33 1/4	+1/4	20.24
Amco 10 1/2 66	150	31 1/4	32 1/4	+1/4	20.36
Amco 10 1/2 67	150	30 1/4	31 1/4	+1/4	20.48
Amco 10 1/2 68	150	29 1/4	30 1/4	+1/4	20.60
Amco 10 1/2 69	150	28 1/4	29 1/4	+1/4	20.72
Amco 10 1/2 70	150	27 1/4	28 1/4	+1/4	20.84
Amco 10 1/2 71	150	26 1/4	27 1/4	+1/4	20.96
Amco 10 1/2 72	150	25 1/4	26 1/4	+1/4	21.08
Amco 10 1/2 73	150	24 1/4	25 1/4	+1/4	21.20
Amco 10 1/2 74	150	23 1/4	24 1/4	+1/4	21.32
Amco 10 1/2 75	150	22 1/4	23 1/4	+1/4	21.44
Amco 10 1/2 76	150	21 1/4	22 1/4	+1/4	21.56
Amco 10 1/2 77	150	20 1/4	21 1/4	+1/4	21.68
Amco 10 1/2 78	150	19 1/4	20 1/4	+1/4	21.80
Amco 10 1/2 79	150	18 1/4	19 1/4	+1/4	21.92
Amco 10 1/2 80	150	17 1/4	18 1/4	+1/4	22.04
Amco 10 1/2 81	150	16 1/4	17 1/4	+1/4	22.16
Amco 10 1/2 82	150	15 1/4	16 1/4	+1/4	22.28
Amco 10 1/2 83	150	14 1/4	15 1/4	+1/4	22.40
Amco 10 1/2 84	150	13 1/4	14 1/4	+1/4	22.52
Amco 10 1/2 85	150	12 1/4	13 1/4	+1/4	22.64
Amco 10 1/2 86	150	11 1/4	12 1/4	+1/4	22.76
Amco 10 1/2 87	150	10 1/4	11 1/4	+1/4	22.88
Amco 10 1/2 88	150	9 1/4	10 1/4	+1/4	23.00
Amco 10 1/2 89	150	8 1/4	9 1/4	+1/4	23.12
Amco 10 1/2 90	150	7 1/4	8 1/4	+1/4	23.24
Amco 10 1/2 91	150	6 1/4	7 1/4	+1/4	23.36
Amco 10 1/2 92	150	5 1/4	6 1/4	+1/4	23.48
Amco 10 1/2 93	150	4 1/4	5 1/4	+1/4	23.60
Amco 10 1/2 94	150	3 1/4	4 1/4	+1/4	23.72
Amco 10 1/2 95	150	2 1/4	3 1/4	+1/4	23.84
Amco 10 1/2 96	150	1 1/4	2 1/4	+1/4	23.96
Amco 10 1/2 97	150	1/4	1 1/4	+1/4	24.08
Amco 10 1/2 98	150	0	1/4	+1/4	24.20
Amco 10 1/2 99	150	0	0	+1/4	24.32
Amco 10 1/2 00	150	0	0	+1/4	24.44
Amco 10 1/2 01	150	0	0	+1/4	24.56
Amco 10 1/2 02	150	0	0	+1/4	24.68
Amco 10 1/2 03	150	0	0	+1/4	24.80
Amco 10 1/2 04	150	0	0	+1/4	24.92
Amco 10 1/2 05	150	0	0	+1/4	25.04
Amco 10 1/2 06	150	0	0	+1/4	25.16
Amco 10 1/2 07	150	0	0	+1/4	25.28
Amco 10 1/2 08	150	0	0	+1/4	25.40
Amco 10 1/2 09	150	0	0	+1/4	25.52
Amco 10 1/2 10	150	0	0	+1/4	25.64
Amco 10 1/2 11	150	0	0	+1/4	25.76
Amco 10 1/2 12	150	0	0	+1/4	25.88
Amco 10 1/2 13	150	0	0	+1/4	26.00
Amco 10 1/2 14	150	0	0	+1/4	26.12
Amco 10 1/2 15	150	0	0	+1/4	26.24
Amco 10 1/2 16	150	0	0	+1/4	26.36
Amco 10 1/2 17	150	0	0	+1/4	26.48
Amco 10 1/2 18	150	0	0	+1/4	26.60
Amco 10 1/2 19	150	0	0	+1/4	26.72
Amco 10 1/2 20	150	0	0	+1/4	26.84
Amco 10 1/2 21	150	0	0	+1/4	26.96
Amco 10 1/2 22	150	0	0	+1/4	27.08
Amco 10 1/2 23	150	0	0	+1/4	27.20
Amco 10 1/2 24	150	0	0	+1/4	27.32
Amco 10 1/2 25	150	0	0	+1/4	27.44
Amco 10 1/2 26	150	0	0	+1/4	27.56
Amco 10 1/2 27	150	0	0	+1/4	27.68
Amco 10 1/2 28	150	0	0	+1/4	27.80
Amco 10 1/2 29	150	0	0	+1/4	27.92
Amco 10 1/2 30	150	0	0	+1/4	28.04
Amco 10 1/2 31	150	0	0	+1/4	28.16
Amco 10 1/2 32	150	0	0	+1/4	28.28
Amco 10 1/2 33	150	0	0	+1/4	28.40
Amco 10 1/2 34	150	0	0	+1/4	28.52
Amco 10 1/2 35	150	0	0	+1/4	28.64
Amco 10 1/2 36	150	0	0	+1/4	28.76
Amco 10 1/2 37	150	0	0	+1/4	28.88
Amco 10 1/2 38	150	0	0	+1/4	29.00
Amco 10 1/2 39	150	0	0	+1/4	29.12
Amco 10 1/2 40	150	0	0	+1/4	29.24
Amco 10 1/2 41	150	0	0	+1/4	29.36
Amco 10 1/2 42	150	0	0	+1/4	29.48
Amco 10 1/2 43	150	0	0	+1/4	29.60
Amco 10 1/2 44	150	0	0	+1/4	29.72
Amco 10 1/2 45	150	0	0	+1/4	29.84
Amco 10 1/2 46	150	0	0	+1/4	29.96
Amco 10 1/2 47	150	0	0	+1/4	30.08
Amco 10 1/2 48	150	0	0	+1/4	30.20
Amco 10 1/2 49	150				

Abta restriction of travel agents valid

AGREEMENT BETWEEN THE MEMBERS OF THE ASSOCIATION OF BRITISH TRAVEL AGENTS LTD
 Restrictive Practices Court (Mr Justice Anthony Lincoln, Mr H. C. Pearson and Mr C. J. Risk): December 20 1982

By Rachel Davies
Barrister

By Rachel Davies
Barrister

By Rachel Davies
Barrister

By Rachel Davies
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By Rachel Davies
Barrister

FT UNIT TRUST INFORMATION SERVICE

Capital Managers Ltd.(s)(h)(c)		0272 132241	
Cambridge Road, Bristol			
std	10	+24	3.47
cont. (units)	0	+24	3.47
ave	8	+14	0.87
cont. (units)	4	+30	0.87
			11.73

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OFFSHORE AND OVERSEAS

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Central African

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129	129	Gold Coast RI	129	+	129	1.5
132	132	Libanon RI	132	+	132	2.0
133	133	Libanon RI	133	+	133	2.0
134	134	Libanon RI	134	+	134	2.0
135	135	Libanon RI	135	+	135	2.0
136	136	Libanon RI	136	+	136	2.0
137	137	Libanon RI	137	+	137	2.0
138	138	Libanon RI	138	+	138	2.0
139	139	Libanon RI	139	+	139	2.0
140	140	Libanon RI	140	+	140	2.0
141	141	Libanon RI	141	+	141	2.0
142	142	Libanon RI	142	+	142	2.0
143	143	Libanon RI	143	+	143	2.0
144	144	Libanon RI	144	+	144	2.0
145	145	Libanon RI	145	+	145	2.0
146	146	Libanon RI	146	+	146	2.0
147	147	Libanon RI	147	+	147	2.0
148	148	Libanon RI	148	+	148	2.0
149	149	Libanon RI	149	+	149	2.0
150	150	Libanon RI	150	+	150	2.0
151	151	Libanon RI	151	+	151	2.0
152	152	Libanon RI	152	+	152	2.0
153	153	Libanon RI	153	+	153	2.0
154	154	Libanon RI	154	+	154	2.0
155	155	Libanon RI	155	+	155	2.0
156	156	Libanon RI	156	+	156	2.0
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FINANCIAL TIMES SURVEY

Personal Computers

Only a few years ago, personal computers were merely for hobbyists. But today sales worldwide are measured in billions of dollars as hundreds of computer companies compete in cut-throat fashion to win a share of the market in micros for home, school, office and factory.

Suddenly there is a micro for everyone . . .

By JASON CRISP

ALMOST OVERNIGHT the personal computer industry has grown from nothing to become a major business that has attracted some of the largest companies in the world.

This fast-growing and highly fragmented industry has attracted hundreds of companies which range from budding entrepreneurial computer engineers, working from home, to corporate giants such as IBM and Xerox. The market place is no less diverse, ranging as it does from small children who play videogames or want to learn to program the computer, to senior executives and scientists in some of the world's largest companies.

Yet at the heart of these disparate systems are a handful of standard microprocessors from a few semiconductor companies—particularly Motorola, Intel and Zilog.

In the six or so short years since the arrival of the first personal computers, the competitive factors in the market have changed considerably. In the beginning there was just the hardware, the computer itself, when price and performance were about the only criteria for success.

But the industry did not really begin to take off until applications software became available—in other words, when the computer became a useful tool to someone who did not even know how to program it.

The classic example is Apple,

Key factors

For quite some time, Visicalc was only available on Apple computers which gave its sales a major boost. But the growth of common operating systems—enabling software to be used on a number of different computers—has tended to reduce the direct importance of software in selling machines.

Distribution and marketing have become increasingly important competitive factors. With diverse markets and low priced products, the methods of distribution and sales has ranged widely. These include mail order, retail chains such as WH Smith in the UK and Safeway in the U.S., specialist computer shops, office equipment dealers and direct bulk

sales to large companies.

Retailers and dealers are limited in the number of personal computers that they can offer, because of the limitations of training sales and support staff. And it is becoming harder for manufacturers to sign up good outlets for their products.

The personal computer industry remains dominated by the U.S. companies including the best-known three, Apple, Tandy and Commodore which more or less created the business. But in the past year or so they have been joined by a host of companies, including IBM, which has had a major success in the U.S. with its "Personal Computer".

Other U.S. contenders include Digital Equipment, Hewlett-Packard, Sperry, Wang and Xerox and a number of other well-established computer and office equipment companies. Much smaller companies growing fast in personal computers in the U.S. include Altos, Convergent Technologies, Sirius, Fortune and Osborne.

The long-expected Japanese competition in personal computers has, so far, had little impact in either Europe or the U.S. For instance, NEC which dominates the Japanese personal computer market, has been notably unsuccessful in the U.S., as have companies such as Sanjyo and Oki.

Although the Japanese com-

panies have produced technologically sophisticated products they have tended to lack suitable software and have also suffered from poor distribution in both the U.S. and Europe. But the Japanese now dominate their home market, which is becoming increasingly sophisticated and moving from entertainment to business applications.

Also the Japanese are substantial beneficiaries of the personal computer boom as a major supplier of peripherals. Most visual display units (VDUs), and many floppy disc drives and printers are made by Japanese companies.

Best-sellers

A number of European companies have also entered the market, including Philips, Olivetti, Triumph-Adler, and ICL. One of the best-selling computers in the world, and costing just £50, is made by Sinclair Research of Britain.

The applications of personal computers are extraordinarily diverse. The largest markets are business use. A number of small companies use them for their accounts, payroll and other routine applications for which larger computers are also used. The application in larger companies is often more varied and specialised but the greatest use is still in financial planning

using programs such as Visicalc.

The home computer market remains very strong, particularly in the U.S., where they are widely used for playing video games. In Europe, there has been a strong thrust by a number of governments to ensure all schools have microcomputers. This, in turn, has stimulated sales of computers for the home, with children showing a remarkable enthusiasm for the new technology.

IN THIS SURVEY

The U.S. market: sales are soaring II
The European market: dominated by U.S. suppliers II

Japanese products become more compatible II
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Massive market for peripheral equipment IV
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Hopes among educators are high VI
Micro marketing and distribution VI

THE WORLDWIDE PORTABLE COMPUTER MARKET

SHIPMENTS AND REVENUE FORECAST, 1981-1986*

	Shipments ('000 units)						CAGR†
	1981	1982	1983	1984	1985	1986	
United States	17.5	92	173	314	525	822	73
United States	26.5	115	230	449	868	1,370	86
Percent U.S.	66	80	75	70	65	60	

	Revenues (\$m)						CAGR†
	1981	1982	1983	1984	1985	1986	
International	9.0	23	57	135	283	548	121
United States	\$45.0	\$192.0	\$345	\$566	\$975	\$1,260	60
International	26.8	47.7	115	242	525	840	106
Total	\$72.8	\$239.7	\$460	\$808	\$1,500	\$2,100	72
Percent U.S.	61	80	75	70	65	60	

* Excluding calculators and consoles. † CAGR, compound annual growth rate.

Source: Creative Strategies International

Portable computer devices: new markets opening up... see Page III

News IBM USE July 1982 Personal level as DEC debuts

THE LAUNCH by Digital Equipment (DEC) of three personal computers has taken place simultaneously in Britain and the U.S. The move by the world's biggest minicomputer maker is a major challenge to IBM, whose own Personal Computer (PC) is unavailable.

DATA LINK 24th May 1982 Software firms eye new DEC micros

THE NEW microsystems with which Digital Equipment hopes to conquer the personal business computer market are already exciting a magnetic pull on software producers.

Two of the first companies in the UK to confirm that they have adapted their software to run on the DEC machines are Applied Data Research and Peachtree Software.

"We've signed a deal with DEC to provide it with suitable versions of our Empire accounting software suite," ADR's Nick Pollard told *DATA LINK*.

"There has been very close collaboration between the two companies."

Empire

MICRO DECISION July 1982

DEC's Rainbow offers good software choice

Digital Equipment, best known in the minicomputer world as DEC, has finally made its entry into microcomputers—and looks likely to make quite a splash.

The launch of the Rainbow 100 personal computer, combined with two more up-market systems closer to the company's minicomputer line, shows that DEC

that the customer gets the widest possible choice of business software.

But for most people the first thing to notice is the pricing DEC will offer the Rainbow at between £2,000 and £2,400 including the twin-process computer, display and twin disc in

Digital's computers undercut competitors

By LOUISE KENOE IN SAN FRANCISCO

DIGITAL EQUIPMENT (DEC) has sent a shock wave through the personal computer industry with the introduction of a new range of high performance low cost machines. DEC has been expected to enter the personal computer market for over a year, but the launch of the Rainbow 100, a microcomputer, has been widely expected.

DEC is introducing three machines—personal computers for the business environment—each offering improved performance over the competition.

The shock was not so much the performance as the low price of the DEC

machines, offering more powerful computers. DEC will sell its personal computers in retail stores, as well as direct to business customers.

"The Professional," as DEC calls its top rated personal computer, is priced at the equivalent of a workstation. For \$5,000, the DEC machine offers twice the performance of the IBM personal computer at the same price," says Mr. Dick Rutter, the industry analyst of the Boston Yankee group. A machine with a more equal

performance to the IBM Professional 300 series will be expected by 1983, he predicts.

The DEC Professional, and the other two machines, which will be launched in the U.S. in the next few weeks, are designed to compete with the IBM Professional 300 series.

COMPUTING 13th May 1982 DEC makes waves in the personal pond

DEC makes waves in the personal pond

Digital Equipment (DEC) has thrown its personal computers into the pool, creating waves which will sink some other vendors and eat away at the shoreline of the market.

DEC has delivered the bases with its personal computers, providing the operating system, which allows to run major and minor applications.

ENGINEERING TODAY 17th May 1982 DEC aims to bury its competitors

Having underwhelmed the world with its Office Plus announcement recently, Digital Equipment (DEC) seems to have delivered a big winner with its family of four personal computers launched last week at a teleconference linking London, Toronto and Boston.

DEC's founder-president, Kenneth Olsen, said before the launch that DEC intended to compete with IBM, but it looks as though even

COMPUTER 17th May 1982 DEC aims to bury its competitors

DEC's new personal computer will even put the heat on IBM

the program loaded is in 8-bit or 16-bit format. This makes it much more flexible than the IBM personal computer and, at £2,400, it is very competitively priced against the IBM machine, which costs just under £3,000.

DEC's top brass stress that the machines have been designed to run the widest possible range of applications programs from the

At last there is something the experts are agreed on.

You can usually count on experts to agree only to disagree.

Until, of course, they're confronted with products as exceptional as our new personal computers.

But even then we have to admit there was not complete accord.

Some were obviously impressed by the Rainbow 100 which has both 8-bit and 16-bit processors.

It's like two computers in one.

At the same time others were undoubtedly

swayed more by the Professional 300 series which puts true PDP-11 minicomputer power in a personal computer for the first time.

Still, they could all wax lyrical over the amount of ready-to-run software available for each model. Or the DECmate II office management system. Or the service options. Or the price. Or the networking potential.

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PERSONAL COMPUTERS II

The U.S. market has grown by 83 per cent in a year

Sales are soaring

WHICH personal computer should I buy? This is the question troubling thousands of Americans this year. Fortunately there is no shortage of people ready to give them an answer. An estimated 130 U.S. companies are competing for a share in the profits of the personal computer market.

U.S. sales of personal computers costing less than \$10,000 will top \$8bn this year, representing a growth of 83 per cent, says Dataquest. This estimate includes only the basic computer price. Future Computing, a market analysis group in Richardson, Texas, pegs the 1982 market for personal computers at \$4.4bn and expects to see it grow to \$13.3bn by 1987. Both groups say they believe their estimates are conservative.

However, many billions of dollars worth of personal computers are out there, there is no escaping them. TV and radio commercials tout the latest machines and software programmes. Parents are urged to give their pre-school youngsters a head start with CDC's Plato software. Radio phone-in programmes answer the urgent enquiries of new computer users about how to operate their machines. Teachers advertise after-school tutorials for the aspiring computer programmer—aged five to 11. While consumer spending is generally in a slump, sales of personal computers soar.

There is a personal computer for everyone. Last week Atari announced computers, games for three year olds with a simple press button control. There is a personal computer designed for the status conscious executive who does not want a keyboard parked permanently on his desk—it folds away to fit in a drawer. There are portable computers for the business traveller, desk-top computers for the secretary, school computers.

manufacturers are treading the path of direct sales. Distribution has become a critical element in the success of a micro-computer.

The computer retail store still sells the bulk of microcomputers but that is changing fast. Specialist stores cannot compete with high-volume retailers in the low end of the personal computer market. The true home computers—machines priced around \$200—are sold in toy stores, department stores and supermarkets. A snag, for consumers and suppliers alike, is that few of these outlets are willing to carry add-on hardware and software for the machines.

Leaders

In home computers the leading suppliers are Texas Instruments, Commodore, Atari and Sinclair. Since a large proportion of the home computer users are children, there is a close link between this sector and the education market. By the end of 1983 every public school in the U.S. is expected to have at least one personal computer. Many will own several.

Personal computers in the \$1,000 to \$5,000 range are the prerogative of the computer store. Customers are offered a degree of support and a selection of software and add-on devices. A new trend in computer retailing is the software store that concentrates its efforts on selling the programmes that make the personal computer run. Also popping up around the U.S. are personal computer service centres that offer quick repairs to users.

In the middle price range personal computers have entered the office automation market, appealing particularly to small businesses as an inexpensive means of automating filing systems and providing word processing capability. In this market sector software sells microcomputers. Apple Computer, for example, has continued to maintain a lead in the market with its Apple II despite the fact that the machine is in many ways outdated by competitors, primarily because there is more software available for the Apple II than any other microcomputer. Next week Apple will introduce an updated version of the II.

A year ago Apple and Tandy led the personal computer market and a host of others followed. Then IBM upset the "apple cart" of the microcomputer market with its own version of the personal computer.

IBM has established a 20 per cent market share and is second only to Apple in the over \$1,000 personal computer market.

IBM is expected to introduce another lower-priced personal computer in 1983, possibly a portable version of the PC.

Apple Computer also has machines waiting in the wings. Next week, the company is scheduled to introduce Lisa—a "revolutionary" machine that will "change the meaning of the words 'personal computer'" according to Apple. Like many of the latest personal computers, Lisa will be built around a "16-bit microprocessor chip" that will give it three times the speed and four times the memory capacity of earlier 8-bit computers.

More important, Lisa is designed to be easy to use. The control codes needed for most computers to select functions will be replaced by a device called a "mouse," a hand-held unit that slides on the desk top and controls the movements of an arrow on the screen. Point the arrow at a graphic symbol representing the required function, press the button and that's it. For the business managers and professionals that are expected to buy Lisa, simplicity is essential. The computer makers know that the vast majority of those who go into learning to use most personal computers are not acceptable in the executive suite. Eventually, the "friendliness" of the \$8,000 Lisa is expected to trickle down to less expensive machines.

Significant

Lisa's impact in the personal computer market will be significant whether or not the machine is itself a success. Already, software publishers are rushing to match the features of Lisa on programmes designed for other machines. These so-called integrated software packages allow the user to perform several tasks simultaneously. To do so they require the power of a 16-bit architecture. The move toward multi-tasking, as the industry calls this feature, is expected to accelerate the growth of the high-end personal computer market.

With 16-bit architectures, personal computers cross into the corporate office automation field. These \$7,000 plus machines can perform the tasks formerly handled by minicomputers. An important feature of the high-end microcomputer is its ability to communicate with other computers on a network. A fast-growing market for personal computers has emerged among large corporations that are putting a computer on every—or almost every—desk.

Louise Kehoe

Japanese become more compatible

THERE IS a growing school of thought which believes that 1983 will be the year when the Japanese properly sink their teeth into the international personal computer market.

So far, they have appeared almost curiously diffident to exploit a technological area to which their expertise would be so suited. But there is evidence now that they have used their time—and experimentation in an explosive domestic market—to good use.

If this is true, then one simple announcement at the turn of the New Year is testimony to the energy and resources Japan has been devoting to personal computers. After five years of labourious work, Matsushita Electric disclosed that it had developed a computer language of its own, using not English, but Japanese characters and ideographs, and eminently suitable for use in personal computers.

This may seem less than earth shattering to the outside world, yet solving the language riddle has occupied some of the best Japanese computer minds for years. Japanese is not merely at once an infinite and a precise language: it has two phonetic "alphabets" (kana) and complex knowledge of 2,500 of which constitute a minimal working vocabulary.

Devising a straightforward computer language in Japanese had seemed so daunting a task that there was speculation that Japan might bypass this stage and go straight into programming by voice recognition. NEC already has such a device, though with limited capability, on the market.

Strong appeal

But the keyboard has a powerful appeal and particularly among the amateur users of personal computers, only ten per cent of whom in Japan are said to be comfortable performing programming tasks in computer languages based on English.

There is every reason to suppose that Matsushita's breakthrough will open a veritable floodgate. Hiding behind its domestic shield, the Japanese personal computer industry has been growing so fast in the past three years that it is hard to keep track of who is doing what.

There are now at least 70 companies in the market, ranging from the traditional electronics plants (NEC, Toshiba, Hitachi, Fujitsu, Sony and Sord) to otherwise insignificant manufacturers of household appliances.

Competition is cut-throat, even with rapidly expanding demand and some business failures must be considered inevitable. The personal computer sector, incidentally, is one which the Ministry of Trade and Industry (MITI) has never taken under its protective development wing.

Last year's output of personal computers in Japan probably exceeded 700,000 units, well over double 1981. Three years ago, the U.S. pioneers in the field (Apple, Commodore and Tandy) dominated the domestic market, but today they probably command under ten per cent.

IBM, well-established in Japan, is a different matter: indeed, it was IBM's decision in 1981 to move into the personal computer market which undoubtedly served as a spur to Japanese industry. Always strong in hardware and peripherals, it quickly perceived that the name of the game was to produce equipment compatible with IBM products.

It helped enormously that IBM opted for the 16-bit microprocessor, because Japan has mastered the economies of scale in chip manufacturing and can turn out larger capacity microprocessors almost as cheaply as small ones.

The next Tokyo electronics exhibition in October, six leading Japanese manufacturers (NEC, Toshiba, Sanyo, Hitachi, Mitsubishi Electric and Matsushita Electric) were all said to display personal computers fully compatible with IBM equipment and software. This fact is important because Japanese software has often been considered subpar by international standards.

The longer-term future for the Japanese in the global personal computer market may well be as the principal manufacturer of hardware. IBM buys the printer for its personal computer from Japan and it is only too easy to envisage Japan supplying foreign companies with personal computers for sale overseas under "original equipment manufacturer" (OEM) arrangements, just as it has done so successfully with televisions and video tape recorders.

In the medium-term, however, the direct export market beckons, if for no other reason than that the major Japanese companies want to make their presence felt. Last year, domestic sales were so good that probably no more than 20 per cent of personal computer output left Japan. But most of the big companies and a handful of the smaller one are now focusing on the U.S., in particular.

Jason Crisp

Jurek Martin

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Competition

Behind all the hoopla, a growing number of computer suppliers are competing in cut-throat fashion to establish, or hold on to, a share of the market. Just three years ago personal computers were for hobbyists—people who enjoy tinkering with electronic toys. With the changing pattern of computer usage several new market sectors have developed—each with its own group of suppliers and distributors.

Established microcomputer makers have been forced to extend or revise their distribution channels. Office automation companies are dealing for the first time with retail stores. Consumer product

U.S. suppliers dominate European market

Although the European market for personal computers is significantly less well developed than it is in the U.S., it is now a major business showing substantial growth in a number of countries.

The European market has been largely dominated by the leading U.S. suppliers of personal computers which is one of the reasons why it has not developed as quickly as the American market itself. The three main driving forces in the U.S.—Apple, Tandy and Commodore—have also had a major impact on the European market. But unlike the U.S., it is Commodore which has the largest share of the market in many European countries.

A number of large indigenous manufacturers have also begun to contest the European market with varying degrees of success including Philips, the Dutch electronics company, Olivetti, the Italian office equipment group; Triumph-Adler of West Germany and Britain's ICL.

In addition, a host of small entrepreneurial firms have launched a number of personal computers which range from home computers costing less than £100 to comparatively powerful and sophisticated machines for scientific applications.

A higher proportion of microcomputers in Europe are used in business than the U.S. where there has been a particularly strong demand for home computers, particularly for playing video games.

West Germany has been the stronger European market for microcomputers for business use. But a number of observers believe the major growth in Europe in the medium-term will come from other countries, particularly Spain, France and Italy.

A recent study conducted by Inteco, part of the leading U.S. consultancy Dataquest, shows the installed base of small computer systems costing less than \$15,000 in business in Europe was 368,000 at the end of 1982. Of those, 80,600 were in West Germany, 71,300 in the UK, 65,500 in France and 58,400 in Italy.

But if home computers are included, then Britain is the

largest European market. This is partly because the UK market has developed more quickly as it is the obvious first market for a company to launch its products—because of the common language.

But the UK also has an exceptionally large number of indigenous entrepreneurial microcomputer companies. The best known and most successful is Sinclair Research which has pioneered the cheapest computers in the world. In the three years since the first Sinclair computer was launched, then, costing £100, the company has sold over 900,000 units.

Selling well

In the UK, there are thought to be more than 500,000 personal computers, of which the majority are the very low cost machines from Sinclair.

Sinclair computers are also selling very strongly in France and West Germany.

There are over 50 UK producers of microcomputers, but many of the smaller companies lack the crucial marketing and distribution strengths which are rapidly becoming the key to the personal computer market.

Small computer companies in the UK include Acorn of Cambridge (which also makes the BBC micro). Research Machines of Oxford, (one of the approved suppliers for schools), plus new companies such as Dragon and Jupiter. More sophisticated products are available from companies like Casu, a major supplier to British Telecom, Rair, the system also sold by ICL, and Systems, the Leeds-based mini-computer company.

The European market for microcomputers for business has been led by Commodore and Apple. But a number of the traditional suppliers of larger computers have been having growing success with small computer systems—some of which fall outside a strict definition of a microcomputer. These include Olivetti, NCR, Burroughs, Philips and Nixdorf. Competition in the current year is expected to increase.

substantially particularly from the U.S. The launch of the IBM Personal Computer in Europe is imminent and is expected to achieve a major share of the market. Digital Equipment (DEC), the second largest computer manufacturer in the world after IBM, has also announced three microcomputer systems which will appear in Europe in 1983 and Burroughs will launch its B20 microcomputer.

Olivetti, last year launched a powerful 16-bit microcomputer, the M20 is one of the leading European competitors for this fast growing market. Thomson-CSF, the French electronics company is the largest single investor in the California start-up company Fortune Systems. Thomson supplies Fortune's powerful microcomputers on an original equipment manufacturer (OEM) basis.

Philips' initial foray into the personal computer market just over two years ago was not a success. It introduced two systems, one for the office and other for home, which were criticised for limitations on software, price and the method of sales and distribution.

Recently Philips launched two new systems which have gone a long way towards meeting the criticisms of the first models. The new systems can run on the widely used CP/M operating system which gives users a very wide choice of software and therefore applications for their computer. It is also more powerful and better designed, but now faces much tougher competition.

While the European market is expected to grow very rapidly in the next five years so is the amount of competition. In addition to the new companies entering the microcomputer field with very competitive products from the U.S., like IBM, DEC and Burroughs there is also the prospect of stronger competition from Japan from companies like NEC, Hitachi and Sharp.

*Details: Inteco, 17 Bedford Square, London WC1 (Tel 01-637 9886).

Jason Crisp

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PERSONAL COMPUTERS III

The trend is towards integrated software capabilities

Big changes in software systems

NEW microcomputer users are quickly apprised of the harsher realities of software. Executives in large companies are protected by their data processing departments from ever having to come to grips with the fact that their computer has an operating system and that operating systems determine the kind of programs the computer will run.

Not so the lone micro star. Right from the word go, the microcomputer user has to realise that unless he or she is going to write all the applications software for the machine, then the choice of operating system is actually more important than the computer itself.

What is an operating system? It is a piece of software which carries out the computer's housekeeping functions. It determines, for example, how it will deal with its disc storage, how it will handle the display screen; if more than one user is connected to the computer, it determines the priority with which each of their requests should be treated.

And it tells the computer how to handle applications programs, lists of computer instructions telling the machine how to carry out specific tasks which are loaded into the computer's memory when required.

In the beginning, there was operating system anarchy. Every microcomputer manufacturer developed a system to suit his own machine.

Commodore

Commodore, for example, which with the Pet, produced the first properly packaged and marketed personal computer, developed its own real time and interactive operating system to run on its increasingly sophisticated range of machines.

Commodore's lead in the marketplace soon meant that a massive amount of microcomputer software was written—but it could only run on Commodore machines.

The turning point was the development of a disk-based, portable microcomputer system which, because it was the first of its kind or because it was simple and effective or a bit of both, became the de facto world standard.

It was called CP/M (Control Program for Microcomputers) and it was developed by Gary Kildall of Digital Research in the early 1970s.

Now it has been adopted by

over 600 microcomputer manufacturers including IBM, Digital Equipment Corporation, Hewlett Packard, Xerox and Wang.

It is a single user system for a very popular family of eight-bit microprocessors developed by Intel—the 8080 and 8085 (Kildall was working under contract for Intel while developing CP/M).

The hobby computer boom was in full swing, floppy discs were becoming popular as principal backing storage on micros and CP/M simply took-off. Kildall says now: "It was a good match of a low-cost processor and a low-cost storage medium with a practical, easy-to-use operating system that didn't try to do everything."

It was certainly good enough to support the development of a mass of packaged software—perhaps as many as 4,000 packages—all of which would run on any machine using CP/M as its operating system.

Portability of software—the ability to take a piece of software running on one machine and transfer it without alterations to run on another has long been a goal of micro software writers.

In the 1970s, Computer Analysis and Programmers developed MicroCobol, a special version of the world's most popular commercial computer language which when used in conjunction with its own operating system, allowed portability.

There were problems, however, and eventually a new company, MPSEL, headed by Alastair Jacks split off from CAP to develop and market the new software. Now it consists of an operating system, BOS, together with applications software for word processing, accounting and other business uses.

BOS software will run on 50 or so micros—the applications software is portable, the operating system has to be tailored to the microcomputer in question.

In the UK, MicroFocus, a small software house has twice won the Queen's Award, once for technology, once for exports for the development of CISC-Cobol a form of Cobol which could be moved from machine to machine. The program is modular, and one part of the module defines the relationship between the program and the operating system.

But the world is moving on to

faster and better microprocessors. Some argue that an operating system called MS/DOS marketed by Microsoft of the U.S. is the industry standard for 16-bit machines; others argue in favour of CP/M-86, a high performance version of CP/M designed for 8086 and 8088 based 16-bit machines.

The IBM Personal Computer, yet to be launched in Europe, is offered with either MS/DOS or CP/M-86.

Other 16 bit operating systems which are in the running include Unix and UCSD-P. Now software manufacturers are turning to what they call "integrated software."

Basically this is a special piece of housekeeping software which is fitted on top of the operating system and manages a number of applications programs at once. It enables, for example, word processing to be combined with graphics and spread sheet analysis to enable businessmen to generate reports.

Progress

Visicorp. (of Visicalc fame) was one of the first to introduce integrated software—it calls its offering "Visi-on."

Apple's latest machine to be launched today will have integrated software capabilities built in.

The microcomputer software business is in a state of dramatic change with the emergence of software "publishers" companies who publish applications programs in rather the same way conventional publishers publish books. Software publishers buy-in programs from software authors, edit them, package them and sell—often for comparatively modest sums.

Major U.S. publishers include Lifeboat Associates and Visicorp; in the UK Caxton was the first to put up its shingle. Now it is offering Cardbox, a personal filing system, Optimiser, a project resource planning aid and Touch 'N' Go, a typing tutor.

There is massive scope for programs of all kinds. For £90 Professional Computer Services will sell you a cheque writer to run on your Commodore. For \$50 Arden Data Processing will sell an estate agent a system to run on an Apple II.

Some idea of the scope can be gained from the fact that only last year, Micro Focus

launched a program called "Animator."

It simply displays Cobol source code on the screen while the program is running, the cursor moving from line to line as each is executed.

The idea is to make it easier to understand the logic of the program and assist the programmer in getting rid of the bugs (errors) it contains.

It sounds the archetypal obvious idea, yet Micro Focus believes it is the first software house to write and market such a program.

Software for the smallest personal computers—the Sinclair ZX81, for example, is ridiculously cheap. A simple planning system or file card system can be had for £7.50 or so. Personal computer magazines publish perfectly respectable programs for the cover price of the periodical.

What is worrying most commercial software producers is piracy. It is very simple to load a piece of software from tape or disc and unload it onto another machine.

According to Mr Ashley Ward of Intelligence (UK) more than 60 per cent of software in use on microcomputers has been pirated.

One answer is the dongle, a device which fits on to the users' microcomputer and which allows the use only of authentic software on that machine.

Dongles or software protection devices seem increasingly certain to become a condition of sale of software packages. The future of independent software houses may depend on them.

Alan Cane

PORTABLE COMPUTERS are hardly new. For years now, computer programmers have worked at home connected to their company mainframe by a telephone line, an acoustic coupler and a terminal-in-suitcase like the Texas Instruments Silent 700.

What is new, and giving rise to considerable interest, is the emergence of machines with considerable processing power of their own, with built-in peripherals such as screen and printer and yet light enough to be carried by their operators as they go about their daily tasks.

Portable computers encompass devices of all levels of sophistication from the programmable calculator to the portable desktop computer.

Creative Strategies International, a well regarded U.S. consultancy, defines four types of portable computer. First, the programmable calculator weighing less than one pound and programmed in a machine language—an example is the Hewlett Packard HP41CV, the most sophisticated of its kind.

Second, the hand-held computer—still weighing less than one pound, but equipped with a small display and program-mable in Basic or some other high-level language—Tandy, Sharp, Casio, Panasonic and Quasar all manufacture such devices.

Then there is the portable keyboard console, weighing two pounds or so, with a keyboard which approaches standard size and an interface allowing the output to be displayed on a television monitor.

The Epson HX-20 is one of the best examples of this genre. It has virtually a full-size keyboard, 16 thousand bytes of read and write memory, a liquid crystal display, printer and cassette tape drive, all in a package which could fit on a piece of A4 paper.

Last, there is the portable

New markets for sophisticated portable devices

computer, a personal computing device weighing less than 30 pounds, with microprocessor, memory, standard alphanumeric keyboard and keyboard all in a durable carrying case.

This sector divides naturally into two clear market segments—the expensive executive personal computers, exemplified by the Grid Compass and the cheaper but tougher sophisticated data collection devices, illustrated by the DVW Husky or Datapoint FCI.

What has generated this sudden proliferation and diversity of machinery? Chiefly, improvements in the technology. In the past few years, semiconductor houses have moved to a way of fabricating silicon chips called complementary metal oxide silicon (CMOS) which makes possible long memory retention with low power consumption, in other words, it makes possible computers which can be run for a respectable time on batteries—the Epson HX-20, for example, will run for 30 hours continuously without recharge.

There have been improvements in display technology—the Epson, Husky and FCI, for example, all use a large liquid crystal screen which makes it possible to display four lines of Basic instructions at a time.

Other display technologies which are advancing include flat panel, the cathode ray tube (CRT) and the liquid crystal display (LCD) which can be used on a desk-top monitor using Sinclair's

"flat" cathode ray tube) gas plasmas and electroluminescence. And there have been significant improvements in storage. The Husky, for example, can store up to 144 thousand bytes—an amount which would have been perfectly respectable in a stand-alone minicomputer of only a few years ago.

The SORD M23P, a new machine from one of Japan's fastest growing computer companies, has two built-in micro-floppies (3.5 inch plastic discs) giving a total of 560 thousand bytes of storage, in addition to 128 thousand bytes of fast memory.

According to Creative Strategies there are currently some 10m portable computing devices installed worldwide and 2.2m units were shipped in 1981 alone. In 1986, Creative Strategies continues, some 24.5m units will be shipped.

Definitions

The exact number of devices installed or shipped depends very much on the definitions used, but the pattern remains the same. In the UK, John Bell Computer Services of Fleet, Hampshire, has examined the market for portable terminals and concluded that market demand for these devices is increasing at over 30 per cent in the U.S. and at over 40 per cent in the UK.

Of the 10m devices which Creative Strategies argued were installed by year end 1980, most

were programmable calculators, but Creative predicts: "Within the forecast period, shipments of portable computing devices will grow at a compound annual rate of approximately 60 per cent, with revenues growing at the rate of 66 per cent compounded annually."

So there will be a substantial number of these devices around. What will they all be used for? Creative points out that high end programmable calculators will be capable of replacing programmable controllers in industry "this will be a tremendous saving to manufacturers who will be able to purchase a programmable calculator at less than \$400 as compared with a \$2,000 controller."

Most of the more sophisticated machines will be used for data capture and processing. The John Bell study points out: "Portable terminals are having a high market impact because they have the major benefits of eliminating costly telephones and reducing time taken from data recording to processing at the central computer and make easy data collection."

At the top end of the market, manufacturers see briefcase computers as personal computing for executives—an alternative to paper and pencil.

According to Creative, Apple is working on a portable computer with 128 thousand bytes of read and write memory. Xerox is working on the Dynabook, a portable version of its "Star" executive workstation.

A novel application noted by Creative is horse race analysis: "Several manufacturers are marketing specific program-mable calculators for handicapping horse racing. Mattel has introduced its 'Horse Race Analyser' priced at \$125—it compares ratings, but leaves the betting choice to the user."

A. C.

How micros provide a more flexible approach

FOR MANY companies familiar with mainframe computing, microcomputers have represented an opportunity to switch from "sledge hammer" solutions to more flexible, personalised approaches.

Kennington, Little and Partners, a medium-sized building and engineering consultancy with its own computing arm, ABC (Computers), had begun using a central mainframe computer system in the mid-1960s for use in its work with reinforced concrete structural design. With the increase in the consultancy's national spread to 12 branch offices and

170 people, plus a shift in the total practice workload, the use of personal computers became particularly attractive.

According to Mr John Seifert, managing director of ABC (Computers): "It became obvious that the job engineers needed direct access to the computer system, both in order to gain the full benefit from its use, and to help overcome the computer barrier that existed then and, to some extent, still persists today."

Microcomputers became the answer in 1978. From the original application in a steel-work program using a Tandy

TRS-80 Model I, the company has expanded its use of microcomputers to cover both centralised and decentralised applications. At the central office, using a TRS-80 Model Two, Kennington Little's micros currently perform job-costing, personnel, fee reminder, job list, client files and analysis tasks.

The job-costing program replaced a bureau program costing £600 a month and is a more comprehensive program with many additional facilities. In the branches, applications are more technically orientated, geared to the design requirements of

the consultancy's clients. Five branch offices have their own Tandy personal computers, backed-up by a central computing unit which provides professional advisory, maintenance and buying services.

All engineers—from young trainees to chartered engineers—are encouraged to make use of the firm's computer facilities. For younger engineers in particular, microcomputers are a training godsend, says the company. The computer allows them to try alternative solutions, and test the sensitivity of structures they design to various types of loading and stiffness

arrangements. From an examination of the results, young engineers can obtain a "feel" for the right answer and develop their value to the organisation.

ABC's introduction of microcomputers to Kennington Little has meant a change in the user-philosophy for a particular program relating to the then existing limitations of microcomputers.

As Mr Seifert says: "It is significant that five years after the introduction of the TRS-80 Model I, the latest Tandy 16 bit machine, coupled to a hard disc, will provide the capacity to revert to an integrated system."

John W. Seifert



"Dad, can you help me with my homework?"

Over the next two years, nearly every primary school in the country will have a computer on its staff. Ask yourself this question: would you appoint a member of staff without looking at his or her CV?

Here are the CVs of the ATARI® Home Computers.

What makes a good teacher?

A good teacher can bring any subject to life. At Atari, we've taken our inspiration from the best teachers we've ever met. Inside our computers, we have a microprocessor whose only job is to operate our high resolution graphics. All told, you

can choose 16 different colours, from a spectrum of 256 hues.

You can even blow up an image or sentence on the screen, a real boon if you're teaching a child to read, or even if you're just making a point.

In fact, on an ATARI computer, you can divide the screen into 60,000 tiny points, each of which can be changed individually to create exceptional graphics. You'll find it makes geography even more riveting as only a good teacher can.

Look, listen, learn.

Yet another chip in our computer lets you create more realistic sound effects. You can even make music in four-part harmony, using the four independent sound synthesisers and play it through the speaker on your TV.

The syllabus.

The ATARI computer has one of the largest software libraries in the world.

We have a program called Graph It™ which produces pie charts (and makes maths even more fascinating).

Another program called Video Easel™ allows children to explore the world of design, colour and form; while Music Composer™ helps children to compose and play music.

As for languages, we have software that can help you teach French, German, Italian or Spanish and, using Atari's unique 'sound through' system, it'll even help with pronunciation.

We even have a program that can teach children how to write their own programs.

Technical notes.

Technically, the ATARI 400™ Home Computer houses 16K RAM and 10K ROM; while the ATARI 800™ can handle up to 48K RAM and 10K ROM which gives you a lot of computer.

"Dad?"

Of course, our computers won't replace teachers, nor will they take over the role parents have always played in encouraging children to learn (or even giving them a hand with homework).

They will, however, make learning as fascinating as only a good teacher can make it.

Atari International (UK) Inc., Atari House, Railway Terrace, Slough, Berks SL1 3BZ. Please send me a FREE brochure, price list and the address of my nearest stockist.

Name _____

Address _____



Home Computers
you'll feel at home with.

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PERSONAL COMPUTERS IV

Potential buyers are all-too-easily confused by computer jargon and the proliferation of products.

Layman's guide to buying a microcomputer

BUYING A personal computer is, in many respects, akin to buying a new car: both the reason for purchase and the method of selection vary considerably from person to person.

Unlike the car market, however, most first-time microcomputer purchasers are working from a position of ignorance, rather than familiarity. If this applies to you, then the following advice may help you to avoid the most common pitfalls.

The term "personal computer" covers machines both for home and business use. Paradoxically, the most significant difference between the two types is not in their specifications, but in the way in which they are purchased. This is an important point to grasp, so we shall deal with the purchase of the two types separately.

With a home computer, the limitations on what you can use it for (whether that be learning to write your own programs, playing sophisticated arcade games, or performing some useful task in the home) will be determined by the design of the computer itself.

Specification is therefore important. Unfortunately, the information presented on the back of the manufacturers' sales brochures is not only couched in impenetrable jargon, but is almost entirely irrelevant. You certainly don't need to know the model number and "clock speed" of the CPU (central processing unit) or the amount of ROM (read-only memory) that it has—most of these buzzwords can be safely ignored.

Key factors

Below is a list of factors which are important. Most of them you can evaluate for yourself with no previous technical knowledge. For others it may be helpful to obtain the advice of someone who knows a little more, or read a computer magazine or book for clarification.

● **Construction:** Home computers vary greatly in both quality and design of construction. The heavier and more solid the better, of course, but ask to see the computer laid out on a table—many are prone to the "spaghetti syndrome"—a mass of wires interconnecting the computer, TV set, power supply, cassette recorder, and something called a "TV modulator".

● **Keyboard:** Until the advent of low-cost speech recognition units, you will be doing all your talking to the computer via the keyboard, so make sure you are happy with the "feel"—not all computers have proper type-writer-like units. And don't be worried that you do not at first

understand the significance of some of the keys—the more special function keys a computer has, the easier it will be to operate in the long run.

● **Screen:** The number of columns that the screen can display is important. Twenty is limiting for many applications. 40 is good, 80 is excellent (and rare). The range of colours (if any), and graphic symbols that can be produced will determine the flexibility of the display. The higher the resolution (for example, 320 x 200 dots), the smoother the curves you can draw and the better the realism of your games.

● **Sound:** Many home computers can produce sounds. Some are restricted to beeps and simple tones, others have the capability to simulate specific instruments or even crude speech. Ask for a demonstration.

● **Memory:** A computer has several kinds of memory which determine the sophistication of the applications which it can run. The type of relevance to end-users is called RAM (random access memory) and its size is measured in KBytes. For home use, a 32 KByte computer is as big as you will need, though some of the cheapest models come with as little as 1 KByte!

● **Expansion:** If you become hooked on computing, you will almost certainly want to expand the basic machine at a later date, either in the size of its RAM memory (to run larger programs) or with extra peripheral devices. Some machines are better for expansion than others because they have a larger range of interface slots at the back for connection to a whole range of peripherals. Others restrict you to the overpriced units supplied by the manufacturer.

This brings out a more general point: some home computers are well supported with both peripheral devices and off-the-shelf software programs from third party suppliers, and this must be viewed as a strength since it brings prices down and increases the range of both games and applications.

Other machines have little available in the form of either hardware or software to add on to the basic computer, and this is particularly true of the newest machines to come on the market.

If you are knowledgeable about computers, then one of

these newer designs will offer better facilities for the same price. If you are a newcomer, then you will be much better off with a longer-established model.

When buying a home computer you do not have too much choice of where to buy. Mail order does not carry as many risks as it once did, but be warned: with new home computers, the lead times are frequently well in excess of those quoted.

More and more High Street multiples are now carrying one or two home computer lines, and offer very competitive prices. However, the level of computer expertise on the part of the sales staff is, not surprisingly, low.

For professional advice, you will need to go to a dedicated computer shop—and pray they don't just baffle you with jargon!

MORE NEW PRODUCTS ON SHOW

PERSONAL COMPUTERS, word processors and micro software feature widely on the 240 stands at the third WHICH COMPUTER? Show opening tomorrow at Birmingham's National Exhibition Centre and closing on Friday. More than 30 new products will be launched at the event.

Tomorrow evening also features the second RITA (Recognition of Information Technology Achievement) awards dinner, with trophies presented to six winners by Sir John Hoskyns, formerly head of the Prime Minister's Policy Unit and now a director of ICL.

The purchase of a business computer must be handled in a completely different fashion because you are purchasing a solution, not merely a capability. That, at least, is the theory. In practice, far too many localities founder because the computer has been bought for the wrong reason. Two golden rules are: never try to computerise a system that is

not working manually—you will end up producing the same mess, but ten times faster. And don't buy a computer because you think your business needs one—always buy it to do a particular task.

The correct procedure is to choose the application first, and from this the software, followed by the hardware. You may have a very specific application in

mind—in which case you may need to get the software specially written. Generally, though, you would be better off starting with a well-proven standard application, before moving into uncharted waters.

Unfortunately, the microcomputer industry has done the computer's reputation a great deal of harm by convincing everyone that computers are really only suited to the accounts department for the processing of payrolls, ledgers, invoicing and stock control.

The microcomputer, however, is much better suited to "personal productivity" computing than to this kind of heavyweight transaction processing. There is a whole new field of application known as "management computing," derived from the electronic spreadsheet programs, of which VisiCalc was the original and

best-known. Here the screen becomes an electronic sheet of paper ruled into rows and columns, and which can be used for all kinds of financial forecasting, modelling, budgeting and "what if" projections.

Two other standard applications are word processing, and databases—which can best be thought of by analogy with a card filing system, in which particular records can automatically be extracted according to some specified criteria.

Using just one or two of these standard applications, it should be possible to pay back the purchase cost of the system within a couple of years and then move on to more sophisticated applications.

When selecting the software to run your application, make sure you obtain some hands-on experience with the package. Does it run in a consistent or

self-explanatory way? Is the documentation well written and presented? Is it easy to "crack" the program? And most important: will this program adapt to the way you run your business, or will you have to adapt to it?

Once you have selected the software, your choice of hardware to run it on will be more clear. Again, a word of warning: stick to the nationally advertised popular business computers for security and reliability. There are thousands of small-time business systems on the market which have only ever sold a handful and are not a good long-term investment either for compatible software packages or after-sales service.

With both software, hardware and your choice of supplier (the more important to a business installation than a home one), it pays to ask for existing customer references. A shop that offers the best discount from the manufacturer's suggested price, will find it difficult to supply vital facilities such as action and program tailoring, and still remain solvent.

Richard Pawson
Editor, Microcomputer Practice

Users soon discover that they need more than just a basic computer, as Elaine Williams reports.

Massive market for peripheral equipment

ONCE THE difficult initial task of choosing one of the many microcomputers on the market has been accomplished, users are then faced with another major obstacle in the shape of the computer peripheral.

The computer peripheral is any piece of equipment, however humble, which helps the user to communicate with or operate the microcomputer in the way intended. Peripherals range from terminals or keyboards which allow information to be directly typed into the computer through printers which provide a hard copy of the results to extra memory which allows the computer to carry out more complex tasks.

The peripherals sector of the personal computer market is the largest sector of it since users soon discover that they need more than just the basic computer in order to have a system which will fulfil their computing needs.

This sector is served by many hundreds of companies. There are small organisations which may specialise in just one type

of equipment alongside the main microcomputer manufacturers such as Apple, Commodore, Sinclair, Texas Instruments, Tandy, Sharp, Hewlett Packard, and Atari which may offer a range of extras to allow expansion of the smallest computer configuration.

Peripherals can be split into several major product areas—memory, input/output devices, interfaces, communications links and special instrumentation.

Every computer needs different sorts of memory for its operations and most computer users find that there is always room for greater capacity to store information. Information can be stored in a variety of ways. Most systems come complete with a certain amount of Read Only Memory (ROM) and Random Access Memory (RAM). Read Only Memory, as its name implies, is used for storing data—such as the computer's main operating programs—which cannot be changed.

Rams, on the other hand, are used for storing user's programs, which may be under constant revision, or information of a more temporary nature while the computer is doing calculations. Such memories are used in terms of bytes, usually eight binary digits. The amount of such memory provided with the basic system is often a measure of the computer's capacity.

Storage devices

Other types of memory such as "floppy disks," Winchester disks and magnetic tape in the form of cassettes are used for storing larger amounts of data and keeping them safe when the computer is not operating. These store user programs which have to be loaded into the computer's main memory to play games or work out accounts, for example. They also store basic data such as names and addresses in a business system, which would be too expensive to store in the Ram or Rom type memories.

Floppy disks are rather like single record disks but are made from a flexible plastic and store information magnetically, as do most of the bulk storage systems. Winchester disks, which take their name from the town where IBM first invented them, are hard disks which can pack more information and allow the computer to retrieve the data stored on them faster than the floppy variety.

Even ordinary audio cassette tape recorders can be used for storing programs and data as magnetically encoded tones.

Whatever the memory capacity a particular computer system has it is useless unless there is some way of entering information or printing out the results of calculations.

In a computer, mainly used for playing games, the simplest way of entering information to control the movement of dots or electronic beads on the screen is through either joystick controls or paddle controls.

Computers with more serious applications use full alphanumeric keyboards but all these can be purchased as individual peripherals to allow the user to change his system. It is even possible to input information by using a light pen or a graphics tablet for complex drawings.

Probably one of the most expensive pieces of equipment needed for a professional or home system is a printer. Prices for printers can vary from just under £80 from manufacturers such as Sinclair to several thousand pounds.

Printers vary both in quality and type from dot matrix to daily wheel and from impact printing to thermal varieties. For example, Sinclair's printer has a full ASCII character set and the company says that it is capable of high resolution graphics. Other companies such as Siskosha, Epson and Smith Corona sell printers up to a cost of around £300.

Plotters for scientific graphs

and art work are usually more expensive because they require high quality reproduction and precise control.

Whatever type of peripheral is used there has to be some means of connecting the equipment to the computer. This is usually done with some form of interface device. Computers are usually equipped with input/output sockets to allow connection to basic devices but it is possible to buy additional circuit boards to link the central computing unit with several peripherals, to allow communication with other equipment or even teletext or Prestel services or to link more than one computer and remote terminals together.

The most common form of interface for personal computers is the RS232 standard, though there are many other systems on the market which allow equipments of different manufacture and type to work together. Interface circuit boards can be relatively cheap, costing around £20 or so.

Wide choice

Printers vary both in quality and type from dot matrix to daily wheel and from impact printing to thermal varieties. For example, Sinclair's printer has a full ASCII character set and the company says that it is capable of high resolution graphics. Other companies such as Siskosha, Epson and Smith Corona sell printers up to a cost of around £300.

Plotters for scientific graphs

Businessman: Revise the Financial Report, graph the sales trends and send the complete report to Head Office.
Apple: Don't forget you have a Business Development meeting planned for 4.30.
Businessman: Thanks. I almost forgot.
Apple: Do you want the graph to show sales actuals against budget?

Businessman: Please. And I want last quarter comparisons for the past 5 years at the meeting too!
Apple: How about the Financial Report?
Businessman: No. But I'll need it for the monthly Regional Directors' meeting in Brussels.
Apple: What Brussels meeting? It's in London this month.

Everybody should have a friend like Apple.



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PERSONAL COMPUTERS V

Another winner for Sinclair

TO MANY people Clive Sinclair appears to be God; others, however, might prefer to call him Mud. In the first category come many of the million or more people worldwide for whom he has made the world of personal computing available at a cost which only a few years ago would have seemed inconceivable. In the second category come some of those who ordered Sinclair's new computer, the Spectrum, on its launch last year, only to suffer delivery delays of, in some cases, three months.

These delays have now been overcome, according to Sinclair Research, and the Spectrum, currently being produced at a staggering 40,000 units a month, is well on its way to emulating the runaway success of the best-selling ZX81 computer, more than 500,000 of which are in use worldwide.

Admiration

After using a Spectrum for six months I can only express admiration for the technology packed into this little box, which measures only 183 x 142 x 30 mm. It has proved easy to program, despite a rubber membrane keyboard which tends to deter touch typists; and in spite of the fact that because of its single key layout word entry system type 'p' at the beginning of a line of instruction, for instance, and the computer types 'PRINT' on the screen. With the Spectrum a convenience by some means, for example—and a nuisance by others, but it saves on computer memory and certainly helps beginners to learn to program correctly.

With some 200 different functions and letters to be packed on to only 40 keys, learning the Spectrum keyboard might seem a daunting task but, as many parents will have already noticed, it only takes a bright 10-year-old a few hours to master it. The free tape that comes with the Spectrum contains an excellent keyboard trainer.

The computer comes with either 16 or 48 kilobytes of user available memory, at £150 or £175 respectively. I would recommend the larger version for its ability to hold sensible quantities of data, to play good versions of chess programs and complicated Adventure games. Its language is Basic, in a wide-

ly used implementation, while other languages will become available; its high resolution graphics are excellent, its use of colour adequate and its sound is quiet. This latter point may be an advantage to people who prefer their homes not to sound like an amusement arcade.

The Spectrum's user definable graphics allow you to design your own space invaders, for example, and save them on tape for future use. It loads and saves programs reliably, using even the cheapest of portable tape recorders.

Where the Spectrum scores most strongly over the competition, however, is in the sheer profusion—and cheapness—of both add-on hardware and software available for it.

A widespread industry has grown up to back up the Sinclair products, making games, utility and educational programs, as well as such things as sound boxes, add-on memory packs, drawing aids, joysticks for games playing, and so on.

In general, these are cheaper than their equivalents for other similarly priced computers. Also promised for the early part of this year is the ZX Microdrive—a microfloppy storage device which will allow the storage of 100 bytes of memory on a single disk which is expected to sell for around £40.

During its two years on the market, the Sinclair ZX 81 has had to face little competition so far from similarly priced computers. With the Spectrum, the situation will be different: computers costing £200 or less are already on the market or promised from Commodore (Vic models); Acorn (Electron); Oric; Dragon; Computers (Linx); Atari; Lowe Electronics (Colour Genie); Jupiter (Ace); Tandy; and Texas Instruments.

There seems little doubt that the Spectrum will remain well up among the leaders in this market for the next year or two. It is to stay where it is, the field Sinclair may well find that it needs to tighten up on reliability—some of the early Spectrums have been suspect—and on its rather quirky sales and service arrangements. Sinclair tries to charge me twice for my Spectrum, presumably consumed with shame, they then tried to make two refunds!

Colin Inman

CASE STUDY ON NEW APPLICATIONS

An aid to farmers

AS A farm management consultant with 17 years' experience with ICI, Iain Rennie knew that he had to be prepared to get mud on his boots if his advice was ever to be taken by the farming community.

Now that he has left ICI and set up as a freelance, travelling round the farms in Hampshire with a portable computer in the back of his car, he is more than ever aware that there must be mud on the edges of the print-out if its verdict is to be trusted.

His aim is to harvest data on the farm, feed it into his portable, and use new technology to help solve the practical problems of practical men. Although he has only recently started his service, he already has 20 clients and two agricultural merchants have expressed interest.

For one farmer, Iain Rennie uses his computer to go through the books, work out cash flows and predict future credit needs. He then takes the printer, and the farmer's local bank manager to negotiate the loan.

Both the farmer and the bank manager are greatly relieved, he says.

Another farm has a severe management problem. There is no proper identification of individual cows and no way of establishing accurate lactation records.

"It will probably take me half a day a week for a year to sort it out," says Rennie.

Iain Rennie set to work with his computer because ICI was phasing out his job as a general farm management consultant. He had the choice between becoming a more technical consultant, advising specifically on ICI products, or voluntary redundancy.

It was time, he thought, to try out his idea to make computing power available to more farmers, so he chose redundancy. There was one problem. He knew hardly anything about computers.

"I knew what I wanted. I wanted something small and portable, with good storage and handling capacity which wouldn't cost too much if I made the wrong choice," he says. He set his sights on the Osborne 1, a small, portable, and easy to use computer.

"I was terrified by computers to start with. I am glad I had my two sons to interpret it all into English for me," says Mr Rennie.

James and Andrew Rennie's programmes are being used together with software developed by Farmfax, a Hampshire company which specialises in computer packages for agriculture.

Raymond Snoddy



Peter Fisher, a millionaire at 22

A big success for Pete and Pam

THE STORY of Pete and Pam Computers of Rosendale, Lancashire, is a commercial fairy tale—the story of how two social workers in inner London bought a personal computer and became millionaires in less than two years.

Its real origin may lie in the fact that Pete—Peter Fisher—was always the sort of child who fiddled with radios and worked hard at his studies. Pam, his wife, grew up in suburban Los Angeles at the height of the space programme. Both also say they have entrepreneurial spirits.

But the story only really got under way three years ago when they bought themselves a joint present while on holiday in California. It was an Apple II which cost \$1,050, when the pound stood at \$2.40.

They soon realised from regular trips to visit relatives in California that much of the equipment for their Apple in the dealers' shops in Los Angeles was not available in Britain.

Took a chance

So, before going to the U.S. for their summer holiday in 1981 they decided to take a big risk: They scraped together £12,000 to buy equipment for Apple computers and, before they left, placed an advertisement in a UK computer magazine.

Among the items they bought were business programmes and \$9,500 worth of software to make more programmes compatible with Apple computers.

"At first there was a very poor response," said Pete. But they persevered, put in a telephone answering machine and worked as social workers during the day and answered inquiries and wrapped packages in the evenings.

In the first month—September, 1980—they sold goods worth £2,500; October, £4,500; November, £11,500; December, £24,000; January, £40,000.

Customers had started asking for items that Pete didn't have and new stocks had to be ordered from California. By March, they had given up their jobs and spent much of their time flying the Atlantic with large suitcases.

"Anything we saw that was new for Apple we worked out we could probably sell 10 of them," says Peter Fisher. "I once checked in over a ton of excess baggage at LA airport," he says. Three hours of the flight home was spent filling in customs forms.

The purchases were financed by family loans and credit cards. When the business started getting out of hand they took all their paperwork round to Coopers and Lybrand, a partner's bag, and asked them to sort it out.

For the year ending November, 1981, turnover was £1.7m with profits of £290,000 and for the 12 months to November, 1982 £4.5m with profits of £750,000.

Turnover for 1983 is expected to be between £7m and £8m; the company has 37 employees; it markets a range of 1,000 items and has 600 active accounts, ranging from computer dealers to multinational companies.

Pete and Pam import their goods—now for IBM personal and Strins, as well as Apple—in a weekly air freight shipment, rather than in suitcases. But they still spend one week in six in California, talking to computer manufacturers, looking for what is new.

Future plans include the possibility of distributing a computer range—if they can find the right one—and perhaps seeking a quote on the Unlisted Securities Market.

Their original Apple still has a place of honour in their home, but now their business is conducted on an IBM 286 computer.

Pam, aged 30, is expecting her third child, so Pete, aged 32, is having two terminals put in at home so they can spend more time with their children.

Raymond Snoddy

USER'S VIEWPOINT BY DAVID JONES

A dealer's help can be crucial

DON'T LET yourself be put off by the stack of manuals that arrive with your computer. The mountain will prove to be as reassuring as it is initially intimidating.

The quantity of information that had to be assimilated in those first few days after unpacking my Apple computer, its disc drives, screen, printer and software was alarming—or so it seemed at the time. Now, a year later, I tend to think that documentation is not always sufficiently comprehensive.

The variation in the intelligibility of the handbooks was enormous. The Apple documents themselves were of a high standard, if sometimes rather maddeningly organised. The handbook that comes with the Epson printer, however, was an outstanding example of how not to explain a new machine to a layman.

One of the main faults in the Epson manual, and one which tends to be a characteristic of the personal computer industry as a whole, was that it failed to explain clearly the relationship between the printer, the Apple computer and the software.

Printers are often sold in ignorance of the computers they are to be used with or of the software to be run. Computer manuals are written without knowing which printers and software are to be used. And although program manuals take into account the computer to be used, they frequently only mention whether the program is broadly compatible with a particular printer, and not whether there are any special commands or features that must be taken into account.

The difficulties of compati-

bility can be even more complex. The capacities of most computers can be stretched by fitting so-called boards, containing extra circuitry and chips. These may work with some programs and not with others.

Difficulties

Yet, despite the difficulties associated with so many separate manufacturers and software houses supplying the market place, the industry's publicity (and more reprehensibly its magazines) plays down the problem of compatibility as if it were of only minor significance and irritation. So it may be for a computer buff who has many hours to pore over difficulties, but it's a different matter for the normal mortal who just wants to understand as quickly as possible how to make his equipment perform properly.

At times such as these the knowledge and readiness to help of the dealer becomes crucial. I have much to thank Chris Gillard of Pete and Pam Computers for in providing support, for example, in making a graph-drawing program called Appleplot work satisfactorily on an Epson printer.

Pete and Pam Computers tries to keep in touch with its customers so that, if one solves a particular problem, the solution is available to its other customers. Would that more dealers adopted the same approach.

Moreover, newcomers and even more experienced users are immensely vulnerable to the dishonest software salesman who pretends to know well the program you are interested in, but in practice has barely used it. There can be few consumer markets where the purchaser is at more of a disadvantage than with personal computing equipment and software.

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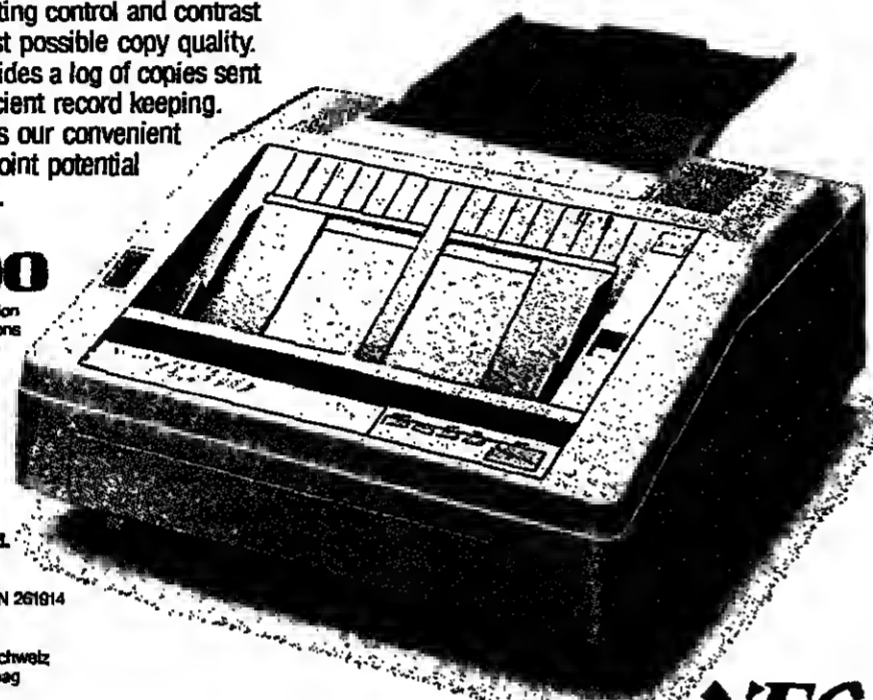
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PERSONAL COMPUTERS VI

How student programmers show the way

COMMERCIAL SPIN-OFFS from Britain's universities have become commonplace. But 10 years experience with computers at King Edward's Five Ways School, Birmingham, has led to something more unusual—a commercial spin-off from a secondary school.

Five Ways Software is in the process of moving from the classrooms to the school grounds to proper offices. And Mr Tony Clements, the director, who is still, technically, a maths teacher on the staff of King Edward's, is about to cut his last link with the educational system and take charge of a commercial company producing educational software.

The management of Five Ways are teachers while the programmers are 18-year-old pre-university year students from all over the country.

A new tier of "middle management," aged about 22, is beginning to emerge as former pupils come back, their university studies completed. Already, Five Ways has produced 15 software titles which have been distributed by Heinemann, the educational publishers. Eight more titles are about to be published and a further dozen are in the pipeline. They range from programmes on the French language to a physics course on lenses and weather for geography students.

Tony Clements has always believed that computers were made for schools and could enhance the teaching of any subject. So, since 1972, he has been running a computer programme at King Edward's on "a shoe string"—trying to ensure that as many children as possible were exposed to microelectronics.

When the Government decided in 1980 to spend £2m over a four-year period in boosting the use of computers in secondary schools, King Edward's was a natural choice to become first a regional centre and then, when the organisation of the scheme changed, a national centre for producing educational software.

The young programmers, using the Acorn BBC Micros, Sinclair Spectrums and Apple computers, earn between £3,000 and £5,000 a year. The experience, Tony Clements believes, makes them "highly marketable." About 150 apply for between eight and 12 vacancies, only five or six of them girls, Clements observes sadly.

Britain has a world lead in software Clements believes and "we have a potentially huge untapped source of talent in the schools."

"Go into any secondary school, and depending on size, you could find 100 youngsters capable of making good pro-

grammers," he argues. Pupils are not, however, being challenged enough in most schools—there are too many computer games and not enough production of software for use.

His young programmers, he admits, have little concept of the importance of the worldwide information technology revolution, but this is more than offset by their imagination, hard work and the fact that, unlike adults, "they have no hang-ups about computers."

The teachers—now management—are themselves being challenged by the need to develop commercial skills. They have set up an international accountancy firm for business advice and a development plan is taking shape.

Unless there is a big expansion of the use of computers in primary schools, Mr Clements believes the school market is unlikely to sustain the company.

He is pinning his hopes on "educational software" use in the home, and on industrial use.

Already, Five Ways has produced software for large companies, including programmes to train managers in the use of microelectronics, and for computer aided design.

"We expect to break even in 1985 and make a profit in 1984," says Tony Clements.

Raymond Snoddy

Strong interest in micros at the secondary level of education

Hopes among educators are high

WHEN NEW Year's day cut off the Government's offer to pay half of the price of a micro-computer for any secondary school, Conservative Ministers had reason to feel pleased.

The offer was taken up by 85 per cent of the roughly 7,000 UK secondary schools, the only in the State sector where in most cases the other half of the money was supplied largely by local education authorities—but in the independent sector as well.

Of the two systems approved for purchase under the offer, Research Machines' 3802 proved more popular than the BBC Model "A" produced in conjunction with Acorn. And while the educational return on the investment is inevitably uncertain, hopes among the educators are high.

The training of a nucleus of computing-competent teachers for each of the 5,800 or so schools is not seen as a difficult problem. Where mathematics teaching at sixth-form level is concerned in particular, the normally cautious State education inspectorate is optimistic that the equipment will enable pupils to develop better mathematical understanding for themselves even though their teachers often seek only to drill them in examination-passing formulas and techniques.

But the general satisfaction with the Government's promotion of micros for the secondary sector of education does not apply in the case of the counter-

part scheme for primary schools. Educational authorities tend to believe that it is at the primary stage that computers can be most beneficial, particularly in stimulating the majority of children who are unresponsive to conventional lessons and by the time they leave the primary stage are liable to be alienated from education for ever.

The promotion scheme for the foundation level of schooling—again a central Government offer to fund half of the cost of equipment for each of the UK's approximately 27,000 state and independent primaries—is relatively new. The offer opened on October 1 and will close with the end of 1984. But there are widespread fears that whatever the take-up, in most cases the potential educational benefits of the installations will go largely unrealised for many years if not for all time.

Three systems are available under the primary scheme. They are Research Machines' 4802, the BBC/Acorn Model B and Sinclair Spectrum.

In September Sinclair started a marketing drive with a three-pronged offer to schools which opt for its equipment which is based on the 48K memory version of the Spectrum.

Schools choosing it can obtain free of charge a ZX printer priced at nearly £50, a free copy of the much-praised Logo language created especially for children in accordance with the educational principles of Jean Piaget, and 10 vouchers each

worth about £45 off the normal price of further Spectrum computers or, at the school prefers, to pay the full price, another printer free of charge.

But of the first 2,000 orders placed, the Sinclair system has attracted only about 5 per cent. "It may be that schools feel the Spectrum can't be expanded as much as they would like," said a senior official concerned with the primary scheme.

"And since a major use is getting children to write stories into the equipment and then progressively correct and improve them, there may be a disadvantage in that Sinclair's keyboard is relatively harder to manipulate."

The RM 4802, thought to be the most robust of the three options, has drawn some 20 per cent of the first orders even though Research Machines does not seem to be making any promotional offers of its own.

The front runner by far, with about 75 per cent, is the BBC B. Schools choosing it receive free of charge a medium of network-adaptation equipment.

"So far, the preference seems a bit surprising given that there were early doubts about the model's being tough enough to resist lots of clumsy little hands," the official commented.

"The box and keyboard are now stronger than they were originally, but whether they are brat-proof has still to be seen."

The fears that the educational

opportunity presented by the micro-computer may be missed do not centre on hardware. Plenty of it is under development and although some will inevitably be substandard, educational inspectors believe that the bulk will be more than adequate and a fair amount excellent.

By the end of the year about 120 different programs should have been made available under the Newcastle-based Microelectronics Education Programme set up by the Government in 1980.

Other software is being produced independently. An example is the Ginn program which simulates an archaeological dig and the recovery (or possibly more often mangling) of the Henry Rose.

A greater worry is that all the three approved systems, email cassette memories which do not provide the storage facilities required for the best primary educational uses. The writing, correcting, reshaping and so on of a program is a case in point. Clearly, the amount of disc memories would have been better.

But the storage facility of at least two of the options can be improved. There is already a disc drive available for the BBC model. Since the extra equipment is listed at about £250, however, the Spectrum might well gain ground when Sinclair markets its microdrive device in the spring at around £50.

Michael Dixon

Four distinct markets have emerged

THE MARKETING and distribution strategies adopted by the major manufacturers and suppliers of personal computers are likely to be the key factors in the market's expansion over the next few years.

With the rapid technological developments of the past decade—and the inevitable tumbling of prices—the consumer now needs to be persuaded with marketing techniques, not too dissimilar from those used by detergent manufacturers, in the choice of a particular personal computer. Hence the decision by some suppliers to use even television advertising—especially in the commercial break during News at Ten which has the right sort of audience likely to be persuaded to use even television advertising—especially in the commercial break during News at Ten which has the right sort of audience likely to be persuaded to use even television advertising.

A year or so ago it would have been unthinkable for personal computers to be featured in television advertising. This was because the industry was not yet ready to define the markets for the product. Personal computers, four distinct markets have emerged: the home user, the educational user, the computer "buff" and the business user.

Accurate statistics for a market which has only emerged in the past few years are, not surprisingly, difficult to come by. However, some trade estimates put the home market at about a quarter of the total, about 30 per cent going into educational and research establishments. The computer expert market is about 15 per cent, with the remaining 30 per cent taken up by small businesses.

The home and schools markets are a response to the dual effect of improving technology and falling prices. The Atari 400, for example, is not only cheaper than a home video recorder and plays sophisticated games but can also handle programs that a few years ago would have been thought suitable for a mainframe computer only.

Christmas clearly showed that parents now see computers very much as a gift for their children. Mr David Johnson, chief executive of the Rumbold

electrical goods chain, believes that the growing use of computers in schools is leading the impetus in the home market.

The business market has developed as a response to rising costs, especially the price of processing information. However, it is clear that that business market has to be tackled in a different way from that of the domestic market, where users want to be involved in learning all stages of the computer's operation. The business user, on the other hand, is more concerned with the end results.

This is borne out by a recent survey of some 1,200 businessmen, carried out by the Rumbold consultancy, which found: "Businessmen, as distinct from home hobbyists, must concentrate on running a successful operation; relatively few wish to risk the serious consequences of pouring hours down the bottomless black hole of do-it-yourself computing."

The largest number of personal computers in the UK is Tandem, which has some 223 shops in the UK and a further 94 dealerships.

Other companies include Curry's, which has a number of specialist computer outlets, and "Byte Shop Computers". Total sales of specialist computer shops were estimated at some £10m last year and are expected to top £100m this year.

Apart from these specialist shops, a number of other retailers are involved in selling personal computers as part of an overall product range. These shops include W. H. Smith, Boots, Dixons, and Rumbold's.

Another major area of retail distribution is mail order, although there has been considerable consumer dissatisfaction in recent months at the delay in dispatching orders by some of the companies.

The increasing importance of the manufacturers' attach to the personal computer market is shown by Rumbold's decision to appoint Mr O. Hornby as Third Party Marketing Manager in the UK.

Mr Hornby has joined Rumbold from Apple and was previously with IBM. In a break with tradition, Mr Hornby will be introducing new distribution channels for Rumbold's products, including the B 20 range of micros.

Philippe Business Systems, another major manufacturer, is also tackling its marketing for microcomputers in a new way. Mr Tony Newson, divisional

director, says that "we will be selling our products in the volume market through direct distribution channels—system houses, micro systems specialists, software houses, and office equipment dealers."

The man responsible for organising this new distribution chain, Mr S. Rodriguez, will be appointing 30 members of the network by the end of this year. The target is complete UK national coverage via 60 outlets by 1983.

Another distribution system being developed by some suppliers is to run a franchised operation. EMG National Micro Centres, a member of the privately-held EMG group of companies, has plans to establish some 200 micro centres by franchising throughout the UK.

From the consumers' point of view, the Computer Association suggests that the potential purchaser might consider buying one of the cheaper models (or even a secondhand one) before investing a lot of money in a sophisticated system.

In addition, it concluded that "buying a computer can be frustrating." It found that "members buying by mail order were often involved in a long wait for delivery." Computer shops, moreover, were not always knowledgeable as might be expected. "The Computer Retailers' Association operates a code of conduct and will investigate complaints against its members," the association adds.

David Churchill

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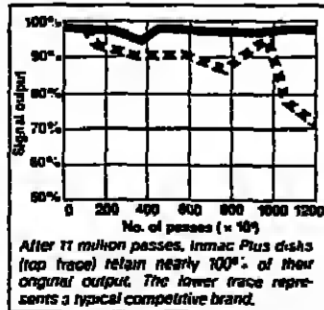
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